Remarks
ON
THE CAUSES AND TREATMENT OF FUNCTIONAL DYSPEPSIA.*

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I WISH to make it quite clear at the outset that the subject we have in hand is the treatment of purely functional cases of indigestion, involving reference to their causation. This naturally excludes all cases of gastric and duodenal ulcer, dilatation from pyloric obstruction, and malignant disease of the stomach; in fact, all those organic cases which have been swept of late into the surgical net of ever-increasing dimensions, which net must now be stretched wide enough to include even certain cases of chronic and latent appendicitis.

This is not the moment at which to discuss the question lately brought forward by Mr. Moynihan of Leeds, which has for some time past more or less occupied the minds of abdominal surgeons and all physicians interested in gastric cases, namely, May not distant lesions, and especially lesions of the appendix, be responsible for symptoms referable to the stomach and commonly ascribed to gastric and duodenal ulcer? But I may say that my own experience would support Mr. Moynihan's contention, as I have met with several cases in which the clinical picture was that of gastric ulcer, whereas the only structural abdominal change found on exploration was in the appendix.

I feel, however, with Mr. Bowlby, and my colleague and co-worker, Mr. Rutherford Morison, that the experience of practical physicians and surgeons does not warrant the conclusion that cases in which the symptoms of gastric ulcer are the result of chronic appendicitis are of common occurrence, and that it is incumbent upon us to approach with still greater caution the question of an operation in cases in which the symptoms point to chronic functional dyspepsia. Before long no doubt we shall view the whole matter in its proper perspective, and be in the position to distinguish on ascertained diagnostic grounds the cases that are suitable for medical from those that are suitable for surgical treatment.

Meantime there still remains to us the vast majority of dyspeptic conditions which form a very large proportion of the cases that engage the attention of the general practitioner. Assuming that organic disease is excluded, I pass on to consider functional gastric disease and its treatment.

First, as to the character of the functional disturbance, I fully recognize the importance of distinguishing between the various forms of dyspepsia from the physiological point of view of disturbance of the various gastric functions, but I think if we are to treat our patients' cases with success we must also recognize that each dyspeptic individual is liable in a peculiar way to some one form of indigestion by virtue of some special inherent weakness or anomaly. In one there is a tendency to excess of hydrochloric acid and so-called "acid dyspepsia" is the trouble. In another the secretion is deficient and his case is one of "atonic dyspepsia." In yet another carbohydrate digestion is imperfect, so starches come to be the bugbear; whilst in a fourth everything is ascribed to disordered hepatic function; or, again, another class may be labelled "defective motility." I do not quarrel with this attempt to lay a finger upon the special part of the digestive system at fault, but what I want to point out is that we do not help our patients a great deal by thus classifying their complaints, and that it is more to the point to recognize that whatever the special form of indigestion to which they are liable may be, the attacks can nearly always be traced to a definite cause which in the individual acts with unerring certainty in producing their own special form of indigestion. In other words, it is clear that whilst it is a matter of scientific interest to diagnose accurately the special form of indigestion with which we have to deal, it is of much greater practical importance to discover the cause and point to the direction in which relief may be obtained.

* Condensed and recast from a lecture delivered at the Post-Graduate College and Polyclinic.

EXCESS OR DEFICIENCY OF HYDROCHLORIC ACID.

When confronted with a case of functional indigestion, it is a common practice to attempt first to ascertain whether the symptoms suggest an *excess* or a *deficiency* of hydrochloric acid—in other words, whether the case belongs to the sthenic or asthenic type of dyspepsia; but to determine this point is often by no means easy.

The former is associated with a more robust and more energetic type of person than the latter, and the subject of excess of acid has usually a fair appetite, which may be excessive, and suffers from epigastric fullness and at times heartburn, pyrosis, etc, which symptoms are generally postponed some hours after food. As a rule, the subject of asthenic dyspepsia is, on the other hand, a weakling with predominating nervous symptoms, lack of appetite, pain or discomfort soon after food, flatulency, etc., which symptoms go on throughout the whole time of digestion. Such patients are afraid of food, which aggravates their trouble, whilst the patient with sthenic dyspepsia is often materially relieved after eating a good meal.

Assuming it is possible to determine the part played in production of the symptoms by an excess of hydrochloric acid, or the want of it, we proceed to make a careful selection of the remedy to be employed. In atonic cases, so often met with amongst poor overworked and nervously prostrate women, we may prescribe an acid and nux vomica mixture with advantage, though it is well to bear in mind the fact that such patients may be suffering at the moment they seek advice from an active catarrhal condition of the gastric mucous membrane—gastritis—when it is advisable to commence treatment by a soothing antacid remedy (bismuth, for example) with very simple soft food. It will not be long before we may resort to a more substantial diet and acid tonic after meals, though the success of our treatment will turn largely upon the management of the diet at the commencement, and of the constipation so often a noticeable feature in cases of the kind.

The sthenic cases—hyperchlorhydria—should of course be treated by antacids. The success of these remedies depends so much upon how they are employed, that we cannot, in instructing our patients, give too much attention to the details. Dispensing chemists will tell you how common it is for the instructions upon a prescription to be incomplete, whilst nearly every doctor has had the experience of receiving a request from the patient, either in person or by letter, for instructions how the medicine is to be taken—before or after meals? It is above all things essential at the outset to secure the patient's whole-hearted co-operation, and it is important that he should understand that a second visit, if possible in a few days or a week, is necessary in order to adjust matters; and this is where the consultant is at a disadvantage, for as a rule he only has one chance, one visit at which to give all particulars.

A judicious combination of soda and bismuth an hour or two after meals, and careful diet, will work wonders, provided our diagnosis is correct, but so great are the difficulties in some cases, that it may be impossible to be quite certain whether we are dealing with a case of excessive secretory activity or one of achylia. I may illustrate by the case of a lady aged 38 the subject of constipation with frequent attacks of indigestion, characterized by pain two or three hours after food, heartburn, retching, pyrosis, etc. An active, clever woman, with a strong gouty history, a highly suggestive type, and presenting the symptoms of excessive acid, yet nothing did her so much good as a strong acid and pepsin mixture after food, whilst antacids, prescribed as I have suggested, did not suit her at all.

The treatment of constipation, very often the fundamental and often a subsidiary cause of the dyspepsia, may also present great difficulties. I do not propose here to enter into these, nor to give detailed attention to the medicinal remedies, because I wish to point out that however successfully the character of the dyspepsia may be diagnosed, and however soundly the remedies may be prescribed, it often happens that we still fail to effect a cure, and for this failure I think both an explanation and another line of treatment may be suggested. Unless we can find out and correct what has brought on the dyspepsia—whatever its character may be—our efforts to relieve the condition itself may be persistently thrown away.

For the patient's benefit, the question of first importance is, What is the cause of the condition? What is it that

has led to indigestion? To discover the cause of the ailment is, as you know, often a very difficult matter. Here the personal factor comes in, and unfortunately it is given to comparatively few to be able to elicit from the patient a clear and truthful story, including statements of a highly personal character, which often are admissions made with great reluctance, but without which the doctor is helpless to aid or relieve his patient. Some men naturally invite confidences, whilst others repel them, but, though the capacity to win confidence is very largely a natural gift, it can in a measure be acquired, and any effort on our part in this direction will be found to be amply repaid.

The other day a lady patient had two small skin growths which needed removal. I got a surgical friend to perform the operation, which he did under local anaesthesia. He was a man whose manner is at times a little abrupt, and whose skill with the knife is not to be measured by his suavity. The novocain employed was not very successful, and the patient called out lustily. "Keep still," said the surgeon. I was sitting by the patient and doing my best to assist my friend by encouraging her to remain quiet, and with a view of attracting her attention, and perhaps also to apologize for his manner, I remarked, "You see, he is a surgeon. I don't think he would make a very good physician"; to which she replied, "No, he wouldn't, and he certainly wouldn't get any of our secrets out of us." This illustrates what I mean, and I would repeat, if we are to treat indigestion with success, we must learn the art of getting our patients' secrets out of them.

The great majority of our functional dyspeptic cases are due to certain obvious causes which I may enumerate as follows: Errors of diet, the bolting of food, dental deficiency and imperfect mastication, irregularity of meals, chronic bacterial intoxication, the abuse of alcohol or tobacco, constipation; or, on the other hand, they may be secondary to Bright's disease, phthisis, or other chronic debilitating disease. Or, again, the cause may be remote; for example, it is not infrequently the case that indigestion forms one of the earliest symptoms of prostatic retention with residual urine, the gastric symptoms disappearing with removal of the cause; or a scarcely recognizable anaemia may stand between us and the successful treatment of our patient. But besides all these, another large class of cases exists in which the cause is to be found in some functional nervous disturbance, and I feel we cannot lay too much stress upon the connexion existing between mental states and the digestive function. So much is this the case that I think it would be well within the mark to say that digestion is carried on at a high state of excellence only so long as mental equanimity is maintained. I will return to this later.

We begin, then, the treatment of a case of indigestion by a very careful inquiry into the cause of the condition; and I wish it to be fully understood that by cause I do not mean the essential pathology of the case, though this also has to be taken into consideration, and an accurate diagnosis should include it; but I refer here to the reason why the patient's symptoms have arisen at this particular time, the act of omission or commission on the patient's part which has determined the incidence of the attack. We have seen that as a rule each patient has his own particular brand of indigestion, the symptoms of each attack varying but slightly from previous ones. One person complains of water-brash and heartburn, another of pain or sense of weight which is always in the chest; another has flatulency in the early morning with distension and depression; in another the pain is referred to the epigastrium and between the shoulders; in another, again, all the discomfort is at night, and insomnia is a prominent symptom. As you know, the symptoms are grouped in endless variety, though repeating themselves in individual cases with wonderful consistency, and my aim is to show that often cases can only be treated successfully when the particular fault or habit upon which they depend has been discovered and corrected. From this point of view cases of indigestion may be arranged in groups, which would have a certain practical utility. Thus we have a series of cases in which dyspepsia invariably follows a lowered state of health from whatever cause, such as overwork and the need of rest and holiday, a severe cold, an attack of influenza, etc. In another, certain articles of diet—a hard-boiled egg, for example—and even certain methods of cooking food stand in a causal relationship to the attack; others fall naturally into the group depending upon faulty mastication; others can be ascribed to constipation, and this is probably one of the largest groups. In others the pernicious habit responsible is overeating, or, again, excessive smoking, particularly cigarettes and cigars; in another group we may place the cases which depend upon the time of meals, and here irregularity comes in; and finally we have the important group of nervous or mental cases. The causes are very numerous and have to be worked out carefully in each case.

Some Elusive Causes of Indigestion.

Let me now refer to a few of the causes of indigestion which are especially apt to be elusive, as patients systematically withhold the information of which we are in search, and upon which the success of our efforts so largely depends. We are, then, placed on the horns of a dilemma—either to remain in ignorance or to risk giving offence by pressing home our inquiry.

The subject of excessive or indiscreet eating and drinking opens a wide field for inquiry, but it is one upon which people are sensitive, and the true state of the case is seldom laid before us. The inquiry has to be approached with the utmost discretion and great care taken to avoid the impression that we have taken upon ourselves the rôle of detective (which we are often forced to do) and are inquiring into our patient's bad habits. I cannot illustrate my meaning better than by reminding you of the difficulty we all experience in eliciting a history of alcoholic excess, especially in women. As I have elsewhere observed, we all know how futile it is to ask some people, especially when the patient is a woman, if they have been accustomed to take stimulants too freely. The habit will be denied indignantly, and it may be our relations with the patient and friends compromised. We are, therefore, obliged to approach the subject very cautiously, adjusting the inquiry to the intellect and temperament of the patient; for example, instead of asking the questions directly, we may, perhaps, begin by a cautious inquiry into former illnesses, and refer to the opinion of medical men under whose care the patient has been, and then ask in a guileless way what stimulant Dr. So-and-so ordered. Then possibly the patient may be induced to discuss the uses and effects of the different varieties of alcohol—brandy, port wine, gin, whisky, beer, etc.—and in this way evince a comprehensive knowledge of the whole series; then we may make a gentle inquiry as to the form that suits her complaint, at which stage it is, perhaps, just as well to desist from further investigation. Here, of course, there is ample room for the judicious exercise of the detective faculty; but common sense, that supreme guide, will keep us right, and may warn us in certain cases that we must do without a history and content ourselves with the knowledge that for all practical purposes a certain group of symptoms are always due to alcohol.

The habit of indulging in excessive meals is a common cause of dyspepsia. The patient is often a highly strung and vigorous person, who exhausts himself by his work, and feels stimulated and sustained by food, and eats more than he can digest, though he often obtains temporary relief by eating. Or he is very fond of the pleasures of the table, and having a good appetite, between his attacks he is led to indulge it whenever any dish to which he is specially partial is before him. Many of these people are not really gluttons, and therefore respond truthfully enough according to their light, when questioned, that they do not eat a large amount, for, in fact, they may not be aware that they are eating more than is good for them. One difficulty is that the generality of people do not know what is enough and what too much food; the ordinary estimate of the necessary amount is far too high. Another is that very few realize the fact that the process of digestion uses up nervous power; most imagine that the more they eat the more strength they will have, whereas the truth is that beyond the amount needed by each individual to repair waste in proportion to his expenditure in muscular or mental work, the rest is superfluous, and consumes in disposing of it nervous energy that might otherwise be utilized in more valuable ways.

Indigestion from a plethora of food may reveal itself by unpleasant taste in the mouth, with dry, parched tongue during the night, a congested feeling about the nose,

a sense of fullness in the epigastrium, a flabby tongue marked by the teeth; or in some cases the tongue becomes sore and blistered; and later, should the cause and symptoms persist, there is loss of appetite, nausea, flatulence with disagreeable breath. No cases of functional dyspepsia are more amenable to treatment if taken early, for they usually respond at once to a suitable diet and a gentle saline purgative with some carminative; but it is essential to discover the cause, for the patient, though eating less on account of loss of appetite, continues because of habit to eat too much; and, to be really effective, treatment should be on starvation lines, so as to secure to the overtaxed digestive organs that full measure of rest of which they stand so much in need. Excess of food is also a common cause of a form of chronic indigestion, which may show itself by symptoms that may scarcely be thought worthy of attention—flatulence, distension after food, drowsiness, a loss of the wonted energy, etc.; and these symptoms, if the cause be persisted in, may become very chronic indeed, and difficult to treat, for the habit of eating too much is perhaps as difficult to control as the habit of taking stimulant to excess or smoking too much, and there are few who will carry out faithfully the doctor's instructions. The truth is, in a chronic case weeks and weeks of care are necessary, and the very best resolutions are broken by the little extra food incidental to a dinner party; or the patient is induced to "seek other advice," for all chronic dyspeptics discuss their symptoms with their friends, and none have the courage to impart the doctor's opinion that they eat too much, but welcome the suggestion that they should see some one else. I have often been struck by the fact that a chronic dyspeptic patient can never be induced to tell you the particulars of the advice he has received, but contents himself with the assertion that the doctor under whose care he has been for some weeks did not understand his case. *Disobedience to law* may be said to stand out prominently as the cause of nearly all dyspepsias, though in none more than in the case of patients who suffer from excess of food.

It must not be forgotten that a patient may be indiscreet in the quality of his diet as well as the quantity, and though not indulging to excess, may continually eat food that disagrees with him. It is a very difficult question how far we can rely upon a patient's statement under this head, for there is nothing which blinds the intellect more than a preconceived idea, and there are very few accurate observers amongst our patients. They will tell you that milk disagrees, that they cannot eat fried fish, that they suffer when the smallest flavouring of onion has been introduced into a dish, that they can always tell by the after-effects when meat, say in the form of a stew, has been cooked more than once; the fads are endless, and though no doubt some of the statements of this kind we hear are correct enough, the majority are baseless and are advanced to explain a dislike which should really be regarded as a matter of taste. These cases are usually examples of nervous dyspepsia, and should be treated as such, or else they are patients who deliberately fall back upon their idiosyncrasies in order to explain symptoms that are really due to some bad habit which it is desired to conceal. But there are many ways in which patients may be indiscreet in the quality as well as quantity of their food. For example, quite a number take too much salt with their food, and in this way aggravate the tendency to an excess of hydrochloric acid; others are too fond of highly-seasoned food or of pastry or sweet things; or, again, the quantity of liquid imbibed at a meal may be too large. In such cases a very careful revision of the diet is absolutely necessary.

DIET.

To this question of diet I can only here refer very briefly. I may of course assume that the mouth has been examined and the teeth and gums attended to, and instructions given as to careful mastication and the necessity of avoiding work or exercise soon after a meal. For the rest, the diet must depend upon the nature of the case, though the majority of chronic dyspeptics do better on a little soft and easily digested food, such as tender white fish, chicken, or tripe, and a little well boiled rice with milk, than on slops; and we need scarcely be reminded that tea, coffee, sweet stuffs, alcohol, and all indigestible foods, including, amongst vegetables, turnips, carrots, parsnips, cabbage, etc., should be avoided. We are often asked to prescribe a special diet, and no doubt there is a great temptation to skate on the thin ice of quackery in directing our patients how they should diet themselves, for they will insist upon minute details, and many doctors indulge their patients' whims to the fullest extent; and unfortunately it is, I fear, well within the mark to say that some of our most distinguished physicians have lowered both themselves and the profession by undue exactitude in the matter of dietetic details, a practice—I had almost said a trick—upon which many reputations have been established. It is of course our duty to advise in favour of a nitrogenous, or a starchy, or, it may be, a mixed diet, and to offer some hints in the shape of warning against indigestible articles of food, and here there is ample room for skill, as some people can digest certain articles when they cannot digest others of very similar nature—for example, potato may disagree whilst rice may not; or hard-boiled egg may be suitable, whilst a soft-boiled egg may cause nausea; indeed, there is no end to the idiosyncrasies met with amongst dyspeptics. It may be useful in some cases to insist upon all animal and most vegetable food being finely minced or put through a sieve or one of the useful modern nut-mills, so as to eliminate all hard pieces and reduce to a uniform pulp. This is a very useful expedient, and certainly does not savour of quackery. I should like to add that it is most undesirable to encourage any patient to dwell anxiously on details of diet. With dyspeptic neurotics, of course, the very opposite should be our aim; but in all ordinary cases of indigestion it is best to keep as far as possible to broad lines of information and advice, which can easily be applied in detail by the exercise of a little common sense.

THE MENTAL ELEMENT IN DYSPEPSIA.

Now let me return to the part played by mental disturbance in the production of dyspepsia. The class of patients I now have in mind when tracing the nervous or mental origin of their dyspepsia must be distinguished from those commonly recognized as dyspeptic neurotics. With the neurotic the dyspepsia is an abiding trouble; he is obsessed by his gastric symptoms, dwells upon them continually, sits in judgement upon every article of food presented to him, yet it is obvious to every one that if it were not the stomach it would be some other organ; that it happens to be indigestion is really an accident in the case; and, further, the particular symptoms as described by the patient usually bear very little resemblance to the account furnished by the patient suffering from the ordinary forms of functional dyspepsia due to the causes I have already referred to. Let us not, however, forget that the subject of neurasthenia does fail to digest his food and suffers in consequence, a vicious circle being established.

But apart from these victims of neurasthenia there is frequently another connexion between mental disturbance and dyspepsia—a connexion that is almost never recognized by the patient, and is unfortunately seldom observed by the doctor, for it is common for both doctor and patient to attribute depression to the dyspepsia when the dyspepsia is really induced by a depressed state of mind brought about by other conditions. A few cases will illustrate the point. A gentleman whose child met with a serious accident sustained a severe nervous shock when the news was taken to him, and this was followed by months of anxiety, with persistent dyspepsia as the outcome. In another instance a young man had failed to pass an examination, considerable importance being attached to the matter at home. A lady dyspeptic had, it was ascertained, been much worried by servants leaving and the difficulty in finding others. A young lady whose life was spent in the most depressing religious environment was victimized by dyspepsia. A gentleman with literary tastes compelled by force of circumstances to devote his energies to a depressing commercial life had dyspepsia without other cause. In another case a young lady had experienced a matrimonial disappointment; in another a lady was compelled to live under great domestic distress, she and her husband leading solitary lives in the same house; in another a young lady had the unenviable duty of acting as go-between for her father and mother, who were continually quarrelling; in another a trained nurse was greatly disappointed of the promotion she expected; in another a lady's home life was made

wretched by the continual grumbling of a very irritable husband.

Cases of this kind might be multiplied indefinitely, but I only desire to illustrate the type. These patients come to the doctor complaining simply of indigestion, and a careful and tactful search has to be made to discover the cause in the shape of some depressing circumstance of environment. Their cases stubbornly resist the ordinary medicinal and dietetic treatment, but respond to a well-directed attempt to remove the cause. If the environment can be modified—that is, if the circumstances themselves can be reached and altered (in some cases, perhaps, by plain speaking to relatives)—well and good; if not, the patient can perhaps be removed from them for a time, or, better still, may by a strong and encouraging effort be induced to take a different attitude towards them and gain a brighter view of life. A difficult undertaking this may be in some conditions, but the result will often repay the attempt, and sometimes has an effect that appears to be almost miraculous. At any rate, neither drugs nor diet, but a change in some life-circumstance, gives the clue to the successful treatment of very many cases of dyspepsia.

As further illustrating the success attending the discovery of the cause of an attack of dyspepsia and its removal, I may mention a few examples. A gentleman whose dyspeptic symptoms had lasted two or three months, and were apparently the outcome of a long period of anxiety on account of his wife's illness, went to see a surgeon, who, taking the case to be probably malignant and suitable for exploration, hedged over the diagnosis and yet left a very unfavourable impression upon the patient's mind, with the consequence that the symptoms grew worse. A consultation was held and a definite decision arrived at against organic disease and against operation, with the most happy results. A very similar case was that of a medical man who suffered occasionally for years from indigestion. He consulted a brother practitioner, telling him he thought he had a pyloric or a duodenal ulcer, and asked him to advise him on the question of operation, as he felt that a posterior gastro-enterostomy might cure him. They decided to come to me, and I felt justified in regarding the case as functional, dismissed the question of operation, and spoke very encouragingly. Within ten days or a fortnight I had letters from both my friends, the doctor and his patient (for they lived at some distance) conveying the intelligence that the symptoms had quite passed off and ordinary food could be taken.

Another phase of the nervous side of indigestion is to be met with in people who exhaust their nervous energy; and the result is the same whether the exertion be physical or mental, whilst not infrequently the candle is burnt at both ends. Practice amongst all classes of society furnishes many examples which belong to this group, and the fact will at once occur to your mind that one of the most useful of therapeutic measures in stomach cases is *rest in bed*. To this we ascribe the great majority of cures in cases of chronic functional dyspepsia in our hospital patients. That physical exertion, if excessive, will derange the digestive functions to the extent of producing a trying illness cannot be denied; here are some instances. A lady entertaining in her country house a party of friends fatigued herself by a long walk, and in consequence suffered, as she had often suffered before, from indigestion. She was unable to rest, and sought relief in careful diet and stomachic mixtures without success, but the attack soon yielded to rest after the departure of her guests. The wife of a member of Parliament, who was most energetic in furthering her husband's interests at the time of the election, developed a group of symptoms referable to her stomach. These she neglected, as she had suffered from indigestion before, and declined to forego any of her engagements, but sought relief in mixtures and diet, so far as she could exercise care, but with little result. I induced her to diet herself very carefully, and to lie in bed for three weeks, which she did with complete success; the symptoms, which had lasted twelve months, entirely disappeared.

Another example of nervous indigestion cured by rest in bed is the case of a lady who experienced a severe shock when travelling with her husband in an express train. The dress of a fellow passenger, a lady sitting beside the door, was found to be caught in the door. The train was travelling at a high rate of speed, and my patient's husband attempted to release the dress by opening the door. It at once swung open, and could not be closed on account of the wind. He struggled with it for upwards of half an hour, until the next stop, and seemed all the time in imminent danger of falling out of the carriage. Weeks of indigestion followed the fright—flatulence with discomfort after food, depression, giddiness, etc.—and there was little or no improvement until she was induced to rest. And it is not alone cases that have an obvious nervous origin that are benefited by rest, for many chronic cases, the cause of which is not easy to determine, that prove most obstinate under dietetic and medicinal treatment, will yield to rest, and it must not be forgotten that a large number of the neurasthenic cases will respond only to rest with isolation from home influences, as treated by Weir Mitchell.

The limits of my paper prevent more than a very sketchy dealing with the subject, but my desire is to put a familiar subject in a somewhat novel light that may help to explain why we so often fail to effect a cure. I am myself so convinced of the practical importance of hunting out the inducing cause in each case of indigestion with a view to its removal, that I regard investigation of the secretory activity of the stomach, followed by prescription of appropriate diet and acid or antacid remedies, as being valuable, no doubt, for giving relief, but only too often insufficient for a cure; and foremost amongst these perplexing and often highly elusive causes stands mental and nervous disturbance.

An Address

ON

REFLEX PAIN IN DISEASES OF THE ABDOMINAL VISCERA.

DELIVERED BEFORE THE GREENOCK AND DISTRICT FACULTY OF MEDICINE.

BY

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THERE is nothing actually new in the symptom of reflex visceral pain; what is really of importance in connexion with it is that we have come to know more definitely about its origin, and much more clearly about its clinical significance. This has arisen largely from the enormous strides which surgery has made within recent years. Previously, it was only through the accidental light thrown upon the subject by a necropsy that a certain symptom during life received its correct explanation after death. So that much depended upon the ever doubtful possibility of a necropsy whether or no a particular symptom would receive its right interpretation. Since, however, the surgeon has found it possible to operate with such impunity upon almost every region of the body, any obscure or persistent symptom is never allowed to pursue an uninterrupted course without an effort to afford relief by direct inspection. Thus, then, many a pain which hitherto had been recognized only as a probable indication of a particular disease, has, as the result of operation, come to receive a degree of certainty which renders it a valuable and positive factor in the chain of symptoms that collectively contribute to a correct diagnosis. I shall limit my remarks to reflex pains as they are manifested in affections of the viscera within the abdomen.

In order properly to appreciate the significance of a pain and the reason for its occurrence, I must outline briefly the normal anatomical and physiological factors which necessarily enter into all considerations of the subject. Pain in itself we must regard as Nature's peculiar and special way of indicating that her normal functions are being prejudicially or injuriously disturbed. That, at least, is its significance; but whether we are to look upon it as a separate and distinct manifestation of a newly awakened sense evoked through a special system

of nerves, or simply as the result of an exaggerated stimulus acting upon ordinary sensory fibres, is matter which enters into the sphere of the physiologist rather than into the domain of the clinician. But whatever be the true explanation, it is certain that the association of pain with the sensory nerves is in many, if not in most, cases a very close one. As regards reflex pain more particularly, we must consider it Nature's way of affording a diseased organ protection against external injury; for, as we shall see later, it renders so sensitive to functional activity both the skin and muscles, that immediately there is danger from any mechanical agents the skin becomes painful to touch and the muscles as rigid as a board.

What may be taken as the normal disposition of the parts in their nerve relation to each other is shown diagrammatically in Fig. 1, representing the brain and spinal cord. From the organ, *o*, afferent nerve fibres, *a*, pass to certain nerve cells, *c*, in the spinal cord; to other nerve cells in close proximity to these, afferent fibres, *a*, come from the skin, *s*, and from other cells efferent fibres pass to the muscles, *m*. Now, under normal circumstances

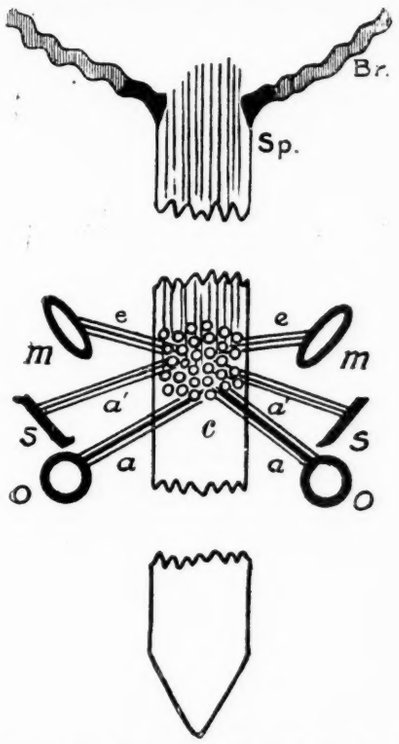

Fig. 1.—Diagrammatic scheme of reflex pain. Br., Brain; Sp., spinal cord; *m*, muscle; *s*, skin; *o*, organ; *c*, nerve cells in spinal cord; *a* and *a'*, afferent nerve fibres; *e*, efferent nerve fibres.

the influences from either the organ or the skin probably remain quite distinct on their arrival at their respective cells in the cord. But supposing from some cause the afferent impulses of the organ are abnormally exaggerated, then the stimulus overleaps the boundary of its own cells, and acts upon neighbouring ones—that is to say, upon those cells to which the afferent sensory fibres come from the skin. Now we know that if any part of a sensory nerve is excited, whether at its termination in the cord or in its transit to the periphery, a sensation results similar to that produced by the actual excitation of the special receptive nerve endings. So, then, if some powerful and exaggerated stimulus arises from the organ, not only are the cells specifically connected with the sympathetic in the cord greatly excited, but also those neighbouring ones associated with the sensory nerves. The result of the over-excitation of the sensory cells is the production of pain; and hence it comes about that pain is often felt in the area of the abdominal parietes over the region of the affected organ. But I must go a little further, and indicate that the stimulus may not only affect the cells in immediate continuity to those directly receiving the afferent nerves from the organ, but it may excite into abnormal activity other cells more remote, so that instead of the pain being limited, as just indicated, to the sensory nerves arising from the region more or less directly over the affected organ, its distribution becomes more diffuse and distant, and pain is felt over a much wider area. Now this wider diffusion is not only dependent upon the intensity of the local stimulus, but it may be, and indeed very frequently is, materially affected by the sensitiveness of the cells themselves. This hypersensitiveness may be due to natural causes within the cells themselves—what we understand by the functional idiosyncrasy of the patient—or to influences exercised upon them through certain conditions of the blood. It must be remembered that while we are reasoning on the assumption that the variations wrought in the production and extension of certain changes are due to influences exercised in the nerve cells of the cord, the real receptive centres for the sense of pain are, of course, in the brain; and that these influences are just as likely to have their origin in the brain as in the cord. In other words, that the same hypersensitiveness which we have assumed to

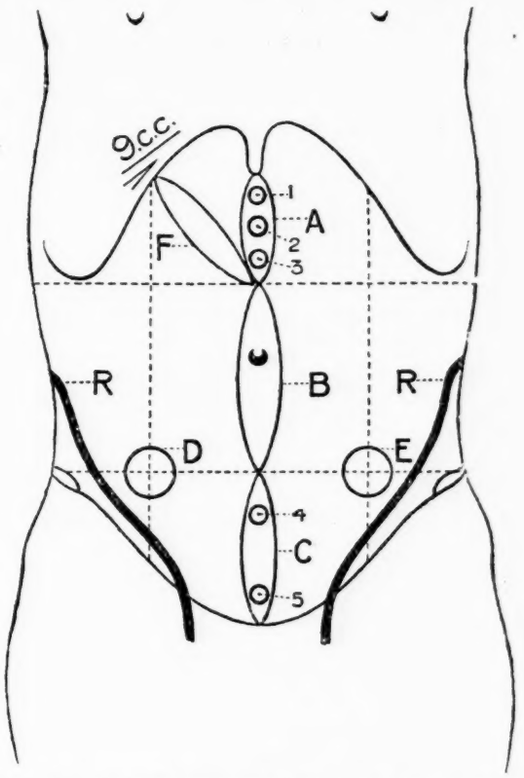

Fig. 2.—Diagrammatic representation of seats of maximum reflex pain in diseases of abdominal viscera. A, Stomach and pancreas; B, small intestine and vermiform appendix; C, large intestine, rectum, uterus, and bladder; D, vermiform appendix, right ovary and tube; E, vermiform appendix, both ovaries and tubes; F, gall bladder, cystic and common ducts, and duodenum; R, kidney and ureters. 1, Gastric ulcer towards cardiac end; 2, gastric ulcer midway between cardiac and pyloric ends; 3, gastric ulcer at pyloric end; 4, large intestine down to splenic flexure; 5, large intestine from splenic flexure to anus (Mackenzie).

exist under certain conditions in the cells of the cord may, under the same conditions, be in the cells of the brain.

And yet another consideration must not be left out of count—the part which the ganglia on the posterior roots of the spinal nerves possibly play in reflex phenomena. Inasmuch as the sensory fibres of the skin, as well as the sympathetic fibres of the viscera, pass into these ganglia, one can quite well understand how in some cases the cells in these ganglia may be the true reflecting media, and not the cells in the spinal cord. However, reflex muscular contraction, such a common concomitant of hyperalgesia of the skin, cannot be explained in any such way, for the efferent nerves of the muscles pass from the cord by way of the anterior primary roots; and so the transmission must take place among the cells of the spinal cord.

I must not pursue this aspect of the question further, for I fear it is carrying me a little out of my depth, and leading me more into the speculative realms of physio-

logical hypothesis than along the surer paths of clinical fact. To return, then, to safer ground, this transmission of symptoms from a viscus deeply seated to a certain area on the surface of the body calling forth sensory manifestations constitutes what is understood by "referred" or "reflex" pain; and is brought about on the one hand by the autonomic or sympathetic nerves, and on the other by the cerebro-spinal nerves. Head, in his investigations, sought to map out the surface of the body into definite areas, which corresponded to equally definite segments in the spinal cord, so that when disease of a given viscus over-excited the cells in a spinal segment a well defined area on the body surface gave the sensation of pain; and that it was often possible to fix on one particular point in that area—known as the "maximum" point—where the pain was acutest and where the skin was most sensitive. I am not going to discuss the truth or not of this investigation. Personally I agree with Mackenzie that the distribution of pain to the surface of the body is dependent more upon the distribution of individual cerebro-spinal nerves than upon any special limited segmentation of the cord; that, as he puts it, "The spread" (of hyperalgesia) "is from one definite portion of a nerve area to another, without completely affecting the whole of one segmental area."

It will have been noted that in the reflexion of pain there is, in addition to the involuntary manifestation, a voluntary exhibition. It is possible to cause pain by certain methods of investigation which is as significant as the unevoked manifestation of it. Both skin and muscles may be hyperalgesic, and this hypersensitiveness is in itself an equally sure indication of a deep-seated lesion. Thus, the patient may not at the time feel pain at a certain place, but any physical measures, such as pin-pricking, pinching, or pressing, will at once cause discomfort. That this condition of both skin and muscle is reflex is almost without doubt, and yet it has been largely the cause of the assumption that where skin and muscle overlie directly the diseased viscus the pain has really been in the viscus itself. This opens up the interesting question, Are the viscera themselves the direct source of pain? Ross, as the result of his investigations, believed they were, and used the name "splanchnic" for visceral pain, as distinguished from "somatic" for pain felt on the body surface. There is this certainty, at least, about the question, that the same stimuli which cause pain to be felt through the medium of the cerebro-spinal nerves fail to evoke the same manifestation in the viscera; if, therefore, a viscus can itself become a positive pain producer, it probably arises from a source peculiar to the organ in which it has its origin. I have said enough, I think, to indicate wherein the difficulty arises, because, when from without we attempt to manipulate a part, we are bound, in the first place, to influence the terminals of the sensory nerves of the cerebro-spinal nerve system before we can exercise any effect upon the organ which is situated more deeply; and but for the elucidation which the direct exposure of a viscus has admitted, it would certainly have been difficult in many cases to have effected a differentiation. In, however, our operations we frequently have the opportunity of demonstrating that ordinary mechanical irritation of a viscus in a patient whose nerve system is not benumbed by an anaesthetic fails to call forth any sense of pain. As I have said, however, this shows no more than that pain cannot be evoked by the usual methods of producing it in the sensory nerves of the cerebro-spinal system, and by no means negatives the possibility of pain arising in a viscus from a stimulus peculiar to itself.

Again, I must not allow myself to be carried away by considerations of this kind, but come to the essentially practical side of the subject, which concerns the clinical significance of reflex pain in its relation to diseases of the abdominal viscera; and in each instance I shall seek to elucidate the symptom by a reference to those nerve connexions which in a diagrammatic and general way I indicated at an earlier stage in my remarks.

The Stomach.

The afferent nerves of the stomach, consisting of fibres of the sympathetic, enter the spinal cord—as judged by clinical considerations—in the dorsal region at that particular part of it from whence the fifth, sixth, seventh, and eighth spinal nerves proceed. Hence we may look for the production of reflex pains in connexion with diseases of this viscus at the peripheral distribution of these nerves; in other words, pain is felt usually in the middle line between the xiphoid and the umbilicus; and inasmuch as the thoracic branches send off posterior branches to the back we may expect to find occasionally that pain is felt there also. So that you will understand how, when the gastric disease is of a diffuse nature, the pain experienced will be spread over an area which may embrace the whole epigastrium, the back between the shoulder blades, and sometimes the left side. But not only through the sympathetic but through the vagus also we may get reflex pains, and in these instances it is through the sensory fibres of the trigeminal, for pain in some cases of gastric disease is felt in the jaw or in the neck. When we come to a localized lesion like an ulcer, there is some clinical significance in the exact situation where the pain is felt most acutely. Mackenzie has pointed out, and I have verified the correctness of his observation, that an ulcer situated near the cardiac end of the stomach causes pain in the upper part of the mid-epigastric line; and that an ulcer situated at or near the pylorus causes pain in the lower part of the same line; while ulcers situated between these two seats occupy similarly a position midway between the xiphoid and the umbilicus.

While, then, it may be said that the situation of the pain on the body surface is useful as a diagnostic sign of the viscus involved—the stomach in the present instance—and sometimes helpful in determining the particular lesion, it is doubtful if we are yet in a position to derive much from the special character of the pain. We hear complaints of sensations described as "burning," "boring," "gnawing," "aching," etc., but they fail to help any further than to indicate that the patient does suffer pain, though from what exact cause it may be impossible to say.

So far I have only alluded to pain which the patient himself is the sole producer of. But it is within our power under certain conditions to evoke pain, and this in itself is of equal importance from a diagnostic point of view. As can well be understood, if the sensory centres in the cord are under the influence of undue excitation from disease of a viscus, they will be doubly susceptible to any stimuli conveyed to them from their own peculiar peripheral terminals; hence we may find both a cutaneous hyperalgesia and a muscle hyperalgesia in those parietal areas of the abdomen where the patient at times complains of pain. Palpation of the epigastrium at particular parts of it will materially support the diagnosis in the presence of other symptoms similarly suggestive. This mechanical method of irritation may be effected by pricking or gently scratching the skin, when any undue sensitiveness indicates a superficial cutaneous hyperalgesia; this may fail, and soreness be induced by pinching the skin, which constitutes a deeper cutaneous hyperalgesia; or, still further, these two symptoms may be absent, and we may find that it is only by deep pressure upon the muscles that pain is produced, and we have what is termed "muscle hyperalgesia." This latter symptom is manifested by a rigid, board-like contraction of the muscle. One form of hyperalgesia is probably as symptomatic as the other, and any form indicates a reflex condition dependent upon deep-seated disease.

Before dealing with such an acute crisis as perforation of a gastric ulcer, I shall discuss reflex pain in connexion with affections of other parts of the gastro-intestinal canal, for perforation of a gastric ulcer is, in its direct manifestations, indistinguishable from perforations of other viscera where a sudden communication is established with the general peritoneal cavity.

Duodenum.

With regard to the duodenum, I may for all practical purposes limit my remarks to chronic ulcer of the canal. As in the case of the similar ulcer in the stomach, the pain is referred to the middle line, but somewhat lower down, nearer the umbilicus. In addition, however, pain is felt to the right of the middle line below the ribs in what is usually termed the gall-bladder region. One must assume that in all cases where a viscus is laterally placed within the abdomen the sensory terminals in the skin, muscle, and peritoneum immediately over the viscus are

those most likely to manifest the greatest excitation; this is but natural, if our original conception of the whole intent of reflex pain be correct. We find in duodenal ulcer precisely the same expressions used by the patient to describe the character of the pain as in the case of gastric ulcer; but, as a differential distinction, the pain after the ingestion of food takes place proportionately later—that is to say, instead of coming on shortly after food is taken, it does not appear for two, three, or four hours. It has these further peculiarities about it, that it often occurs at night, and, when present, is relieved by the consumption of food; this latter peculiarity has earned for it the name of "hunger pain."

Small and Large Intestine.

As we pass down the canal to the small and large intestine we encounter difficulties which render both the explanation and the clinical significance of reflex pain a source of much perplexity. So far as we know, the cause of pain in the intestinal canal is exaggerated or abnormal peristalsis; in other words, undue contraction of the muscle forming part of the bowel wall. This may be brought about either by the irritating effects of the contents of the canal, by excessive nerve stimulation from more distant parts, or by obstruction to the onward progress of the faeces. The character of the pain may be the same whatever the nature of the cause producing it; its variation is rather one of degree than of kind. The middle line of the abdomen still remains the seat where the pain is most markedly reflected, but it is very frequently diffused over a much more extended area on both sides. We have this distinguishing feature about intestinal pain—that, unlike all other intra-abdominal viscera, with the exception of the kidney and ureter, it tends to travel, and may often be felt passing from one point of the abdomen to another. The extent, however, of the migration is largely dependent upon the length of the bowel through which a peristaltic wave passes. Now, the question of most clinical interest is, Does the disease in any part of the bowel manifest itself by pain which will enable us to localize its situation? Yes and No. Yes, to this extent, that a pain which arises in affections of the small intestine is limited almost entirely to the umbilical region, whereas in involvement of the large bowel pain is felt in some part of the hypogastrium. Further, in cases of a well-defined and distinct seat of obstruction, the pain will travel to a certain spot and there remain, indicating that the peristaltic wave has been brought to a point beyond which it does not, or perhaps cannot, extend. In noticing more particularly the spot up to which the pain works, Mackenzie considers it possible to distinguish between obstruction above and below the splenic flexure; thus, he says: "In obstruction at the splenic flexure the pain did not descend below the middle of the hypogastric area; while the pain due to peristalsis below the splenic flexure was felt about and below the middle of the hypogastric area." The negative answer to my question concerns chiefly the small intestine, for, so far as our present knowledge goes, we are unable, by the simple manifestation of pain, to localize the seat of disease in any particular part of it.

There is one rather striking feature about abdominal pain in connexion with bowel disease to which I must draw attention, because I have always felt that it is one very weak link in, if indeed it does not break, the chain of argument which seeks to explain all pain connected with visceral disease within the bounds of reflex pains. My chief reason for thinking that in bowel disease we have to deal with really a splanchnic pain is that one usually fails to obtain any evidence of a cutaneous or muscle hyperalgesia. Now a pain so acute as is sometimes intestinal colic from obstruction ought to excite an excessive irritability of the cells in the spinal cord which should render the sensory terminals in the skin, muscle, and peritoneum peculiarly sensitive to external stimuli; but we often find that a patient is relieved by pressure or rubbing of the abdominal parietes. Perhaps one ought not to include muscle tissue, and therefore viscera which are essentially muscular in function and formation, in the category of abdominal viscera proper. Nature certainly seems to make an exception in her method of dealing with the bowel when implicated in obstructive conditions as compared with her protective measures in certain diseases of other parts. Instead of rendering the abdomen rigid and the skin tender, which would effectually forbid the application of any external stimuli, it admits of deep pressure and massage being exercised, and thus relief afforded in a way which could not otherwise be. That colonic affections do quite possibly evoke reflex pains seems supported by the fact that patients who suffer from chronic constipation resulting in overloading of the colon sometimes complain of a dull heavy aching pain across the lower dorsal region. The only explanation of this can be that the pain is reflexed through the posterior primary divisions of the lower dorsal spinal nerves which distribute sensory branches to the back.

Before leaving this point, I might add in further support of the existence of splanchnic pain that I think there is something reasonable in the assumption that undue contraction of involuntary muscle tissue should always in itself be a direct source of pain from analogy to the cramp-like pains of hypercontracted voluntary muscle. To discuss this particular aspect of the subject properly, I feel one ought to embrace considerations of such a dssease as angina pectoris; but this would carry me without the limits of my object this evening, which is to deal solely with the abdominal viscera.

The Vermiform Appendix.

Diseases of the vermiform appendix are usually considered after those of the large intestine, although strictly, both pathologically and clinically, they ought to be regarded as midway between affections of the small and large gut, for the viscus itself is really a remnant of that which originally formed the commencement of the large bowel. In both nerve and blood supply the appendix is intimately associated with the lower end of the ileum, and herein will at once be seen the reason for the reflex pain associated with diseases of the organ becoming manifested in the same region as pain arising from affections of the small gut—that is to say, in the umbilical region. But for reasons it is difficult to explain, the pain is sometimes limited from beginning to end to the right iliac region. There is no doubt as to the reflex character of the umbilical pain when it arises; and there seems little doubt that, in most instances at the early stage of the disease, the iliac pain is also reflex. In further support of the latter opinion is the fact that the pain is sometimes felt in the left iliac region. This latter manifestation is of special interest, and will be referred to later in connexion with the consideration of the ovarian and renal reflexes. It indicates the intimate association which must exist in the spinal cord between the cells which control one half of the body with those that control the other. But why the cells on the opposite side of the cord should in certain cases be more readily excited than those on the side on which the disease exists is decidedly puzzling. It is easier of explanation in the case of bilaterally disposed viscera. The only possible explanation seems to be that, the organ being originally a part of the large intestine, the tendency is for the pain to be referred, as in cases of disease of that particular segment of the gut, across the hypogastric region, and, not being complete in its development, it is only at the two sides that it is felt. The skin over the iliac fossa is supplied with sensory branches from the last dorsal nerve. It can be understood, therefore, why it occasionally happens that pain or stiffness is experienced in the lower portions of the erector spinae muscle, for branches of the posterior primary divisions of the spinal nerves supply the part. Subject as the appendix is to inflammatory changes and to obstruction, there is the possibility of distinguishing, through the character of the pain manifested, the one kind of lesion from the other. Obstruction from whatever cause—whether from stricture, from kinking, or from a concretion—produces pain of the colicky, cramp-like type felt mostly in the region of the appendix itself. The similarity is precisely that of obstruction in the large or small intestine, and due to a like cause—the effort of muscle contraction to overcome an obstacle. If unassociated with any inflammatory changes, neither cutaneous nor muscle hyperalgesia may be present over the area occupied by the appendix; but appendicular colic, when of any severity and duration, is more frequently than not

accompanied with a certain amount of inflammation, and then before the inflammation may have extended to the parietal peritoneum there may, and probably will, be reflex hyperalgesia of the skin and muscle. Much diagnostic importance was at one time attached to the elicitation of pain by pressure over what is known as McBurney's point. In the majority of cases, where the appendix is normally placed, this is doubtlessly the point of maximum acuteness; but it would be wrong to rely upon it in all cases, and, with a wider knowledge of the subject and the extreme vagaries in the situation of the organ, the sign is not much relied upon at the present day. Pain which arises from a localized peritonitis—where, for instance, the inflammation extends to the parietal peritoneum—does not come within the scope of our consideration, for the sensory terminals are then themselves engaged in the inflammatory process, and become a direct source of pain. Reflex pain in connexion with perforation of the appendix I shall refer to later, when discussing the subject of perforations generally.

Cholelithiasis.

Gall-stone disease affords some very interesting examples of reflex pains; and if we consider, in the first place, the nerve connexions of the gall bladder, cystic and common ducts, the reason for these will become at once apparent. The afferent branches of these parts pass into the hepatic sympathetic plexus. Now this plexus has entering into it filaments from the right phrenic nerve and from the left vagus, and, indirectly through the solar plexus, it is in connexion with the great and small splanchnics. The phrenic is connected with the fifth and sixth spinal nerves which go to form part of the right brachial plexus; the vagus has connexions with the left trigeminal; and the two splanchnics connect with the fifth, sixth, seventh, eighth, ninth, and sometimes tenth spinal nerves. Thus, then, to express more clearly and succinctly the relation of these particular viscera to the body surface, we may say that affections of the gall bladder and ducts will produce (1) symptoms referable to the back, side, and front of the abdomen, due to the peripheral distribution of the lower spinal dorsal nerves; (2) symptoms referable to the right shoulder and outer side of the right arm, due to the peripheral distribution of branches of the fifth and sixth spinal nerves of the brachial plexus; and (3) symptoms referable to the head and face through connexions of the vagus with the trigeminal. But these anatomical considerations and expressions must be further reduced to terms of simple practical clinical significance. In gall-stone disease, then, we have pain referred to the middle line in the epigastrium, to the anterior right subcostal region below the ninth costal cartilage, to the back between the shoulder blades, and to the right shoulder. But the areas over which pain may be felt are often much more extended; indeed, gall-stone disease affords a very good illustration of the theory propounded at an early stage of my remarks, where, if you remember, I stated that the stimulus which, arriving by the autonomous fibres, excited the receptive cells in the cord, might overleap its own proper bounds and excite neighbouring cells, so that the sensation produced would be that a much wider area on the surface of the body was involved in pain. For we not infrequently find that pain may be felt in the left shoulder or in the left hypochondriac region at a point where it is correspondingly felt in the right. From the epigastrium, also, it may be diffused over the whole abdomen, and sometimes pain reaches as high as the neck and as low as the loins. The peculiar acute colicky or cramp-like character of the pain, sometimes lasting for hours, is probably due to the powerful contraction of the muscle fibres in the parietes of the gall bladder and ducts striving to rid the part of a gall stone. In many instances it is possible to form a tolerably correct diagnosis, from the situation of the pain, of the seat of the stones, whether they are in the gall bladder, in the cystic duct, or in the common duct. In connexion with this differentiation I cannot do better than quote such a good authority as Mayo Robson. When the stones are in the common duct he says

> The frequent attacks of pain are usually less severe than when they are in the cystic duct. . . . The pain also is in the epigastric rather than in the right hypochondriac region, and passes through to the right dorsal lumbar rather than to the right infrascapular region, and the tender point is found between the umbilicus and ensiform cartilage rather than between the ninth costal cartilage and umbilicus, as in ordinary cholelithiasis.

Reflex cutaneous and muscle hyperalgesias are often readily demonstrated by any attempt to irritate or press upon the skin in the right hypochondriac or epigastric regions. The value of these symptoms lies in the fact that they—the symptoms—may be present when otherwise the patient is free from any involuntary exhibition of reflex pain.

Renal Calculus.

I now pass from the subject of biliary calculi to that of renal calculi. The reflex pains connected with the kidney are, so far as we know, entirely limited to the existence of foreign material in the pelvis of the organ. Inasmuch as the parietes of the pelvis contain involuntary muscle fibres, it is probable that the pain is produced by an excessive contraction of this tissue in its effort to rid the cavity of such irritating material as pus, tuberculous débris, or calculi. The same reasoning applies to the ureters, the pain evoked being due to a powerful peristaltic wave striving to force out of the canal that which is foreign and detrimental to its normal function. The same interest attaches to the renal reflexes as to those just depicted in the case of the biliary, for we have pain felt in parts far removed from the actual seat of the cause. Without going into such minute detail with regard to nerve connexions, I may briefly indicate that in the cord centre, at which the autonomic nerves arrive from the kidney and ureter, there are the cells with which the afferent fibres of the eleventh and twelfth dorsal and first and second lumbar spinal nerves are connected. Hence, in accordance with the reasoning previously adopted, we shall expect to find the pains arising from calculous disease referred to the peripheral distribution of these nerves. Through, then, the last two dorsal nerves pain is felt in the loin and extending round to the iliac region; and through the genital branch of the genito-crural derived from the first two lumbar, pain is felt extending down the groin into the testicle. While these may be taken as the typical seats of reflex pain in renal calculus, the area of its distribution is often much more extended. We have, then, to assume, as was done in the case of biliary calculi, that neighbouring cells in the cord are irritated, and so pain felt as if coming from the sensory terminals of nerves supplying parts on the opposite of the body, or over the entire abdomen. The most puzzling feature, however, of pain so referred is that the affected side may remain free and the symptom be excited solely on the unaffected side. This reno-reflex, as it is termed, may unfortunately lead to error in diagnosis, and consequently to mistake in treatment. I have fully described in my book on *Abdominal Pain* a case that came under my own observation where an exploratory operation was performed on the supposed affected kidney. No stone was found; and unfortunately the patient died from suppression of urine. At the *post-mortem* examination a calculus was discovered in the opposite kidney—that is, on the side in which there had been no pain. It is very difficult to understand why pain should be more readily reflexed to the side of the body opposite to that on which the diseased organ is situated. It may be that the cells on one side of the cord are more easily excited than those on the other, so that the impression conveyed is that the pain is derived from the supposed morbid stimulation of the sensory nerves whose afferent fibres enter those particular cells. I shall refer to this particular point again when speaking of ovarian pain.

Pancreas.

I shall not occupy much time in discussing reflex pain as manifested in affections of the pancreas; and for this cogent reason, that it is not so much by pain as by other signs that we diagnose disease of this organ. The pain is usually felt in the middle line of the epigastrium, the most tender spot being about an inch above the umbilicus. It sometimes extends round to the left side, and sometimes passes backwards to the mid-scapular region. It will thus be seen that the situations of the pain correspond very closely to those experienced in diseases of the stomach.

Uterus, Ovaries, and Fallopian Tubes.

Affections of the female reproductive organs afford some very interesting examples of reflex pain, and possibly exhibit a wider distribution of such pains than any other abdominal viscera. This arises from the fact that the sympathetic plexuses—the ovarian, pelvic, and hypogastric—are connected with the eleventh and twelfth dorsal, the lumbar and sacral (particularly the third and fourth) spinal nerves. We therefore get pain referred to the lower part of the hypogastrium, the lumbar and sacral regions behind, and the iliac regions in front, with occasionally extensions down the legs. Now, of all situations for the most frequent exhibition of pain in affections of these organs, the left iliac region is the commonest, and in this region we may indicate as the *lieu d'élection* a point about 2 in. to the inner side of the superior iliac spine. Here pressure at once evokes pain, and both skin and muscle may be found hyperalgesic. It may be asked, Why should the left side be more frequently the seat of pain than the right in uterine disease and in affections, it may be, of the right ovary? We must assume, as was done in the case of the kidney, that the cells on one side of the cord are more susceptible to stimuli than those on the other; but that hardly gets over the difficulty of explaining the constancy of the pain on the left side unless we accept the assumption promulgated by Herman that the lesser strength of the left side of the body renders it capable of offering less resistance to sensory stimuli. In regard to the frequency with which female patients who suffer from affections of the reproductive organs have widely diffused referred pains, one must remember that these patients are often anaemic, neurasthenic, and generally wanting in body tone. As indicated in my introductory remarks, the sensitiveness of the receptive centres is greatly augmented by certain conditions of the blood, so that a stimulus arriving at one group of cells may readily extend to other groups, and so greatly widen the area over which reflex pains will be felt.

Acute Abdominal Crises.

Let me now refer to that most interesting exhibition of reflex pain which is manifested in almost all acute abdominal crises. I allude to the sudden, agonizing, and prostrating pain felt in the mid-line of the body as the result of a gross lesion associated with one or other of the abdominal viscera. It matters not where the viscus is situated within the abdomen nor where the lesion is located in the viscus, the initial acute seizure is most frequently felt in the mid-line, although variations will exist regarding the particular spot in this line. I have said enough not to need repetition of the nerve connexions between the various viscera and the spinal nerves. You will remember that in nearly every instance the pain was referred to the middle line, and that this was explained on the basis that the cells in the cord which received the afferent fibres of the sensory nerves contained in the lower six intercostals were abnormally irritated. The question, then, is really one of degree. These same cells receive a sudden and violent stimulus from an equally sudden and virulent lesion, and the clinical result is an unusually severe attack of pain proceeding as if from the terminals of the sensory nerves implicated. I believe that the acuteness of the initial seizure is largely affected by the relation of the lesion to the parietal peritoneum. This structure, as you know, is supplied by sensory fibres from the spinal nerves, and has within it many sensory nerve endings. Hence, when from the rupture of a viscus irritating material comes in contact with it, a very acute stimulating influence suddenly acts upon these sensory nerve endings; and, if it be not in itself a direct source of pain, one can well understand how it can indirectly augment the reflex symptoms evoked by the lesion in the way already explained. Without attempting to differentiate clinically between lesions causing pain in the same spot, I may give a sort of classified list of the diseases which may be expected to cause reflex pain in certain definite areas. Thus, (1) perforation of a gastric or duodenal ulcer, rupture of gall bladder, acute haemorrhagic pancreatitis, cause acute pain to be felt in the epigastrium; (2) perforation of the appendix vermiformis or of the small intestine, ruptures, strangulations and obstruction sfrom various causes, embolism or thrombus of the mesenteric vessels, etc., cause acute pain to be felt in the region of the umbilicus; and (3) rupture in tubal affections, including extrauterine pregnancy, causes acute pain to be felt in the hypogastrium.

In these few remarks, gentlemen, I can claim to have given you no more than a very cursory review of the subject of reflex pain as exhibited in certain affections of some of the abdominal viscera. I would like to interpose here and emphasize the fact, for the sake of making the drift of my remarks and conclusions quite clear, that while diseases of the abdominal viscera may give rise to reflex pain located in one or other of the anatomical regions into which the abdomen is artificially divided, all reflex pains experienced in these particular regions do not necessarily signify diseases of the abdominal viscera. Without bearing in mind this very important clinical fact, we may be led occasionally into committing egregious blunders both in the matter of diagnosis and, what will be still worse, in treatment.

The subject of reflex pain is one which is, as you will have already gathered from what I have said, fraught with innumerable difficulties—difficulties that involve intricate questions of anatomy, physiology, and pathology; and for want of exact answers to these questions it has often been necessary to base reasons on theories. If, however, even on the somewhat insecure basis of hypothesis, it is possible to formulate a few practical guides and derive some clinical assistance, we may legitimately feel that the ends are not altogether unjustified by the means; and that, until light shine out of darkness, our benighted path must be illumined by such artificial means as will best enable us to encounter and overcome, though it be ever so imperfectly, the many obstacles that at present beset our progress.

A Clinical Lecture

ON

HOW TO OPERATE FOR APPENDICITIS.*

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IN a previous lecture[1] I gave my views about the choice of time for operation. I then submitted that:

1. It is wise to remove the appendix in the quiescent period after one definite attack of appendicitis.
2. The best treatment of acute appendicitis is an operation at the earliest possible moment.

In this lecture I propose to deal with some of the important points in the technique of the operation and after-treatment.

THE INCISION.

The same incision is not suitable for all cases. This could hardly be expected considering the varying conditions under which the operation has to be performed, and the varying position and abdominal relations of the appendix and caecum.

(*a*) *The Valvular or Gridiron Incision of McBurney.*

This incision has the advantages that hernia is very unlikely to follow it even when an abscess has to be drained, and none of the nerves or muscles of the abdominal wall need be divided, so that the abdominal wall is not weakened. It is particularly suitable for those interval cases in which the diagnosis is certain. It is also suitable for acute appendicitis in which an operation is performed before there is any suspicion of spreading peritonitis.

It is, I think, the best incision for appendicular abscess in the iliac fossa, but it is not a good one for pelvic abscess, on account of the difficulty of draining. When the position of the appendix is fairly well known, either by the presence of swelling or rigidity, or from the history of localizing signs in previous attacks, the gridiron incision can be made at the most suitable point. When the appendix is retrocaecal the incision is made unusually high up and far back, and when it is in the pelvis the opening is made low down and far in.

* Delivered at Guy's Hospital.

When the McBurney incision is placed in the usual position, a little above and internal to the right anterior superior spine, it has the serious disadvantage of giving too little room if the appendix be adherent and low in the pelvis, or unusually high and fixed behind the caecum or to the liver. It also hampers the surgeon when he wishes to explore the whole of the abdomen thoroughly, or when he, having made a mistake in diagnosis, has to deal with a perforating gastric ulcer, suppurating gall-bladder, or tubal disease. A good deal more room can be obtained by slitting the anterior wall of the rectus sheath upwards or downwards, and by displacing the rectus muscle inward. It is unsuitable for cases in which there is a suspicion of spreading peritonitis of uncertain origin. A very small incision is sometimes made for the removal of the appendix, but this is inadvisable, however much it may be appreciated by the patient. Some patients seem to judge the surgeon's skill by the shortness of the scar, but these stab incisions do not allow the proper exploration of the abdomen. Moreover, it is not easy to close the deeper layers of the abdominal wall properly in a small incision. A passion for these small incisions has frequently led to the overlooking of a serious condition that could have been found and remedied if a proper incision had been made. For instance, a piece of gangrenous bowel and even a large foreign body in the pelvis have been overlooked with disastrous results.

The transverse incision of Davis is very much the same as the usual gridiron incision, except that the fibres of the external oblique are cut across. This does not materially weaken the abdominal wall, and it allows drainage at the extreme outer end of the wound, where a hernia is very unlikely to develop. It is therefore particularly suitable for the treatment of the common abscess localized in the iliac fossa.

(*b*) *The Incision through the Rectus Sheath.*

Of the various vertical incisions, one near the middle line is not very suitable, because of the great difficulty of getting to the appendix and removing it, especially when it is retrocaecal and high up. It is much better to make the wound over the outer third of the rectus muscle, and then to displace the latter inward or to separate its fibres. In either case the deep layer of the rectus sheath and the peritoneum are incised in a transverse direction, so that none of the nerves need be divided, unless it becomes necessary to enlarge the wound to an unusual extent on account of a wrong diagnosis. I adopt this incision for all cases demanding a thorough exploration of the abdomen, and whenever spreading peritonitis is suspected. It is the best incision for pelvic abscess. The risk of hernia after it is small, even when temporary drainage has to be adopted. It is an advantage to make the opening fairly small at first for exploratory purposes. It can be freely enlarged as may be required, upwards or downwards.

Protection of the Abdominal Wall.

In infective cases it is particularly important to prevent infection of the abdominal wall during and after operation. The sides of the wound can be protected by gauze pads and sterilized waterproof material accurately fixed to the parietal peritoneum. These are not removed until all the infective material has been dealt with. When drainage has to be adopted, infiltration of pus amongst the layers of the abdominal wall can be prevented by accurately suturing the layers together around the drainage tube, thus obliterating all spaces between the muscles.

Protection of the General Peritoneal Cavity.

It is wise to protect the healthy part of the peritoneal cavity by careful packing, so that if during the separation of the appendix from dense adhesions a small abscess be opened, the risk of contamination of the peritoneum is reduced to a minimum. In dealing with an abscess in the iliac fossa it is important to pass gauze packs upwards towards the right loin and inwards towards the left loin, and downwards and inwards towards the pelvis, before attempting to deal with the abscess. When the abscess is adherent to the abdominal wall it can be incised without opening the general peritoneal cavity. Then it is not necessary to pack unless the surgeon is going to remove the appendix. In cases of spreading peritonitis due to appendicitis, it is important to remember that the upper part of the abdomen, especially about the diaphragm and spleen, are generally healthy at the time of the operation. It is therefore important to protect these regions immediately the abdomen is opened. This is done by passing a roll of gauze into each loin. This serves to absorb any fluid that may pass upwards during the manipulations in the lower part of the abdomen. Another gauze roll is then passed into the pelvis and is left there to soak up the fluid while the appendix is being sought and removed. This saves time. One end of each gauze roll is secured to the towels by forceps so that none may be lost. Irrigation of the peritoneal cavity is not so satisfactory as mopping for peritonitis of appendicular origin.

The Removal of the Appendix.

Is it Wise to Remove it in all Cases?

Most surgeons are agreed that it is wise to remove the appendix when it is the cause of spreading peritonitis, and, as a rule, it is an easy matter to do this. There is little or no difficulty in finding it, and the adhesions, if any, are soft. There is more uncertainty about the wisdom of removing the appendix in cases of localized abscess. To save life it is often enough to drain the abscess without removing the appendix. The incision can be so placed in some cases that the general peritoneum need not be opened. It must be remembered, however, that when the abscess is merely opened and drained recurrence of symptoms occurs in about 15 per cent. of the cases, and that the subsequent attacks may be either grave or slight. In some cases a sinus never heals, and in others an induration persists in the iliac fossa. In some there is pain localized in that neighbourhood. It may be either due to persisting disease of the appendix, or to intestinal adhesions or bands interfering with the functions of the lower part of the ileum or caecum. In addition to this it may be urged that a diseased appendix left in the abdomen is a danger to life, for infection is more likely to spread along its veins, giving rise to portal pyaemia, septicaemia, or pulmonary complications. Intestinal obstruction is also more common when the appendix is not removed. Moreover, drainage has to be adopted, and has to be continued for a longer time, and therefore hernia is more likely to develop. When recurrence of symptoms follows and the appendix has to be removed, the operation is usually difficult on account of the extensive and dense adhesions.

During the last six months I have had to operate on four patients for intestinal obstruction secondary to appendicitis. In two the symptoms did not arise for several years; in the third the operation became necessary within three months of the onset of the appendicitis, and in the fourth within three weeks. In two other patients I have had to operate for recurrence of appendicitis long after simple drainage, and in each of these a small abscess was found at the second operation, which was a very difficult one. In another patient, in which a faecal fistula had existed for nine months after simple drainage of an abscess by another surgeon, I operated with a view of closing the fistula, and found the whole of the appendix to be lying free in the general peritoneal cavity, except at its base, which was constricted and formed part of the wall of the sinus. The distended appendix might have burst at any moment, and would probably have given rise to general suppurative peritonitis. In several other patients on whom I have operated for ventral hernia following simple drainage I have found the appendix in a similar state. Some surgeons never remove the appendix except when they find it hanging loose in the cavity of the abscess. This is a rare event. Others maintain that if a calculus is to be found in the abscess it is not necessary to seek the appendix. This is a false doctrine, because a calculus may be discharged into an abscess round the root of the appendix, which in healing becomes more contracted than ever, and the obstruction is a potent cause of future attacks of appendicitis.

Some make it a rule to remove the appendix only when the abscess is quite small, believing that it is more likely to be destroyed when the abscess is large, and that the risk of removing it varies with the size of the abscess. I do not believe that there is sufficient ground for this belief. There is no doubt that patients are occasionally seen with such large abscesses, and so very ill, that simple drainage is the only justifiable treatment, but these cases should become less and less common. For over a year

I have not left the appendix in any of my cases, and this practice has lowered the mortality.

In removing the appendix in these cases it is of vital importance to prevent infection of the general peritoneal cavity. The chief danger lies in spilling pus or infective material into the abdomen without knowing it, and this is particularly liable to happen when the appendix is sought through a small wound made directly into the abscess. Some part of the surface of the appendix is nearly always free in the peritoneal cavity, and its careless removal under these circumstances is apt to be followed by unsuspected leakage downwards and inwards towards the pelvis and general peritoneal cavity with disastrous results. The opening of the peritoneal cavity in these cases does not seem to matter if proper precautions be taken to prevent soiling. The risk of setting up spreading peritonitis can be prevented in one or two ways:

1. By deliberately opening the general peritoneal cavity first, and making a large enough incision to enable the surgeon to pack around the abscess in all directions, thus fully protecting the general cavity before opening the abscess. All the pus is soaked up, and the abscess cavity is cleaned before the appendix is sought.

2. By very carefully mopping away all pus and infective material from an abscess cavity opened extraperitoneally before attempting to remove the appendix.

The first is the better method, although it may seem at first sight to be more risky. The second method is particularly suitable for all large abscesses which have become adherent to the abdominal wall. When the packing and mopping are well done, the appendix can be safely removed, and all adhesions can be broken down, thus lessening the risk of intestinal obstruction and other complications already mentioned. Before removing the protective packs the region of the abscess is thoroughly cleaned by means of moist gauze, and then dried with sterilized gauze.

How to Remove the Appendix.

All the elaborate and fanciful methods of dealing with the appendix deserve to die, for all that is necessary is to clamp the base of the appendix with a pair of strong Spencer Wells forceps, which crush and break the muscular and mucous coats (after Doyen's method). The crushed part is then divided without fear of any leakage, for the cut ends are sealed by the crushing. It is not necessary to tie the stump, nor is it wise, for the ligature is a source of danger, and prevents proper inversion of the stump. The inversion is done by means of a simple seromuscular purse-string suture of catgut. This is placed in the wall of the caecum a quarter of an inch away from the base of the appendix. The meso-appendix is firmly tied and divided before the appendix is removed. This simple method is suitable for all cases of appendicitis except those in which the caecum is so stiff and friable that inversion is not practicable. Then it is enough, when the patient is very ill, to ligature the appendix close to its base, and to remove it and all the mucous membrane on the distal side of the catgut ligature.

Drainage.

There is a good deal of doubt as to when it is necessary to drain the abdomen in these cases. Appendicitis and its complications are so variable that it is almost impossible for any one to tell another what to do under all circumstances. In the quiescent cases with no pus there is, of course, no need for drainage. When a small abscess is discovered in a subacute case, it is a little difficult to decide whether to drain or not. If care be taken to remove all the pus, there is no need to drain the peritoneal cavity, but a wisp of gauze can be placed in the abdominal wound as a precaution against suppuration in the parietes. This can be removed at the end of thirty-six hours.

When an operation is performed during an attack, the question of drainage has to be decided upon the local and general condition. When the operation is done within twenty-four hours of the onset of the attack, it is an exceedingly rare thing for drainage to be necessary if care be taken to get the peritoneum clean and dry. When the infection has not spread beyond the appendix, it is not necessary to drain the peritoneal cavity, and this is true also of those cases in which there is localized plastic peritonitis only about the region of the appendix.

When there is a large abscess, I always leave a drain in the abdomen for at least forty-eight hours, and the same is true of all late cases of spreading peritonitis. In the early cases, where there is only a serous or slightly turbid fluid in the abdominal cavity, it is not necessary to drain; but when the effusion is sero-purulent or sanious, or the infection is virulent, as shown by the absence of lymph and the presence of severe collapse, it is safer to do so. In those suppurative cases in which the abdominal cavity is not drained, suppuration is apt to develop in the abdominal wall unless the latter be temporarily drained. This can be done by passing a small drainage tube or a wisp of gauze to the deep surface of the external oblique or the rectus sheath. If this simple method be adopted, the peritoneum can be safely closed in a great many more cases than we used to consider to be safe even a year or two ago.

But it is a mistake to go to the absurd extreme of closing the abdomen accurately in all acute cases, for unless the resistive power is good, the peritonitis may go on spreading, or cellulitis of the abdominal wall may develop and end fatally. Some say that it is impossible to drain the peritoneal cavity, but this is absurd, seeing the amount of fluid that escapes in these cases of suppurative peritonitis, especially when they are treated by the continuous infusion method. Some surgeons still use Keith's glass tubes, passing them into the pelvis, but I have recently heard of a case in which a part of the wall of the bowel was strangulated in one of the holes of a Keith's tube. I never use a rigid drainage tube, believing it to be a potent cause of faecal fistula and ulceration. Moreover, I think that there is no advantage to be gained by passing any tube into the pelvis or far among the intestines. The practice is fraught with danger of intestinal obstruction from contracting adhesions. All that is necessary is to pass a tube of very wide calibre right through the abdominal wall, its point only projecting about 1 in. into the abdominal cavity. A wick of gauze is passed through it and carried a little deeper than the tube, sometimes to the outer side of the caecum.

A retrocaecal abscess is best drained into the loin. The wound in the anterior abdominal wall can then be completely closed and a hernia avoided. When the disease extends into the pelvis it is much better to drain through the upper end of the vagina, because the abdomen can be completely closed and a hernia avoided. Moreover, the drainage is far more efficient and the patient gets well in a shorter time, often leaving the hospital at the end of three instead of six weeks, as happens when the pelvic abscess is drained above the pubis. When it is necessary to drain through the abdominal incision, I close the greater part of the peritoneal wound by means of a catgut suture, unless there is a grave reason for hurry. Stout salmon-gut sutures are passed through all the other layers and tied, except two or three placed where the tube is inserted. In most cases these are tied after thirty-six hours and a hernia is thus avoided. This plan is safer and simpler than giving a second anaesthetic for closing the wound a few days after the primary operation.

After-Treatment.

Nothing need be said here about the after-treatment of the patients in whom no peritonitis exists at the time of the operation; but when either localized or spreading peritonitis has developed a great deal depends upon the after-treatment. In such cases it is necessary to do all that is possible to keep the intestines at rest, to deal with collapse, and to procure sleep. With these objects in view an injection of morphine and atropine is given before the patient recovers from the anaesthetic. This prevents the pain and restlessness which come on in bad cases as the patient regains consciousness. Only water is given by the mouth for at least twelve hours. A pint of saline is run slowly into the rectum directly the patient is returned to bed. This is more likely to be retained if morphine has been injected. If the patient is very collapsed at the time of the operation 1 pint of normal saline solution is injected into each axilla by means of the Lane apparatus, all of which can be sterilized; this is by far the quickest and simplest way of introducing the fluid. To prevent infection the skin must be thoroughly cleaned, and to avoid haemorrhage the needle should be passed right through the pectoralis major into the middle of the axilla. If the

rubber bag is suspended at a good height the infusion can be completed within ten minutes. The fluid is absorbed very rapidly, so that it is unnecessary to use such an elaborate and comparatively dangerous method as intravenous infusion, still used by those who do not know or who do not appreciate the advantages of the simpler method. In bad cases the initial axillary injection is followed by the continuous rectal saline infusion during the first twenty-four hours. In milder cases I prefer to have a saline enema given regularly every three hours. If carefully given it is generally retained.

To procure sleep the first night after the operation a dose of morphine may be injected subcutaneously, or 30 grains of aspirin may be added to a saline enema.

In the treatment of the shock strychnine is avoided, because clinical experience confirms the statement of Crile that strychnine is the surest method of producing shock. Alcohol is not much better. The effect of adrenalin is very transient, and the same is true to a lesser degree of the various preparations of ergot. Lately I have used subcutaneous injections of pituitary extract, which raises the blood pressure for several hours. Shock is rarely severe when the operation is completed, as it should be, within twenty or thirty minutes. The collapse, which is due to deficiency of fluid, is best treated by giving plenty of water by the mouth, by the rectum, or subcutaneously. It is particularly important not to give any purgative during the first two days after the operation; there is nothing more harmful. There is no need to get the bowels open for the first day or two, because they are generally fairly empty as a result of the vomiting and enforced starvation which usually precede the operation. Moreover, it is of vital importance that the small intestine should be kept at rest, for intestinal movements tend to disseminate the peritonitis. The purgative often fails to act, especially in the worst cases. Under these circumstances the drug is an irritant poison, and generally induces vomiting. The bowels generally act naturally on the third or fourth day, and often there is diarrhoea about this time. An enema given after the third day does no harm, and is useful to empty the lower bowel. If flatulence be troublesome, minim doses of oil of peppermint may be given by the mouth or a rubber tube with several perforations may be passed into the rectum and left *in situ* for an hour or more at a time. It is unfortunate that many people still believe that it is necessary to purge these patients. Some have an idea that if the bowels are not opened soon the patient will die. Others think that an action of the bowel is necessary for the excretion of toxins. There is no foundation for either belief. It is true enough that the bowels are paralysed in the worst cases in which the operation has been too long delayed, but no purgative will make the paralysed bowel act. My experience is that it increases the distension, probably by forcing the contents of the upper and comparatively healthy part of the intestine into the ileum, which is more or less paralysed.

The treatment of paralytic distension of the intestine is a difficult subject. Pituitary extract may be found useful, as suggested by Blair Bell, but in bad cases temporary enterostomy is the only thing likely to succeed. In several cases treated in this way I have been able, three or four days later, to close the fistula under a local anaesthetic. Three or four days after the operation laxatives and purgatives are not so dangerous, and it is often good to give small doses of nux vomica and belladonna, with the idea of keeping the intestines active at this stage to prevent them getting too adherent. The half-sitting position is very valuable to ease the breathing and to lessen the risks of subdiaphragmatic and pulmonary complications.

In the after-treatment of the wound, when drainage has to be adopted, the drainage tube is generally removed about the third day, and is replaced by a smaller one or by a wisp of gauze. In many cases when there is only a little discharge the stitches previously inserted are tied, almost completely closing the wound. When there is much discharge, drainage has to be continued for a longer time. When the discharge has the offensive smell characteristic of the *Bacillus coli*, the wound may be bathed and the dressing soaked with a weak solution of sodium hypochlorite or hydrogen peroxide. Healing is sometimes hastened by the use of *Bacillus coli communis* vaccine. When drainage at the vagina has been adopted the tube is removed on the third day. If the temperature goes up again, the wound at the posterior fornix can be easily dilated with the finger to let out any collection of pus. A vaginal douche is used in these cases.

REFERENCE.
[1] BRITISH MEDICAL JOURNAL, January 29th, 1910, p. 245.

THE EFFECT OF ABDOMINAL COMPRESSION IN A CASE OF VERY RAPID HEART,

WITH INSPIRATORY OBLITERATION OF THE RADIAL PULSE, FOLLOWING INJURY: RECOVERY.

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WE know so little of the causes of the conditions at present described together under the common name of "paroxysmal tachycardia" that I may be excused for giving a fairly full description of the following case. Some additional interest attaches to it because, in its course, an inspiratory obliteration of the radial pulse (the so-called "pulsus paradoxus") was observed. I do not think that this inspiratory obliteration has been previously recorded in association with cases of this sort. Abdominal compression is a recognized method of treatment in "paroxysmal tachycardia," and in this instance it appeared to have been the chief means of saving life.

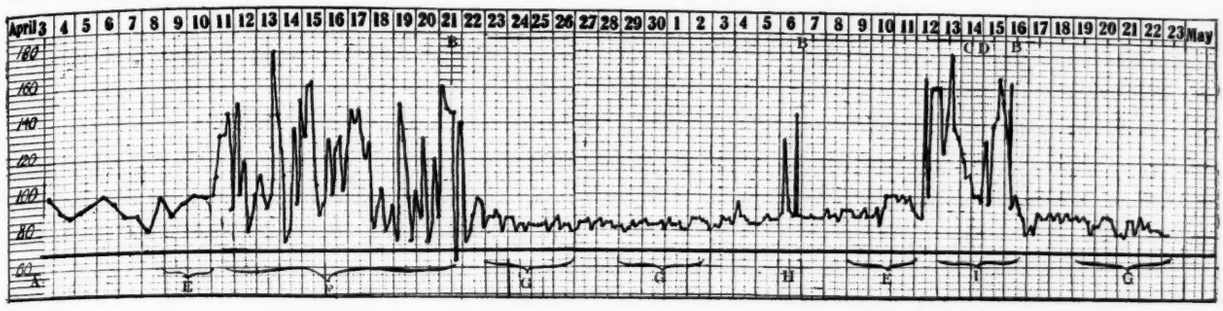
A gentleman aged 68, well built and healthy, was on April 3rd, 1909, thrown down by a large motor car which backed on to him. No bones were broken (as an *x*-ray examination proved), nor was there any cerebral concussion, but his right hip and thigh were bruised, as well as the left side of his face, and probably a certain amount of general shock was sustained. He was attended by Mr. Russell Coombe, removed to Miss Johnstone's Home Hospital, and placed under the best possible conditions. It is not unimportant to state that he seemed in no sense neurotic, being, in fact, very courageous, and, under the circumstances, most philosophic.

His pulse on the day of the accident was counted at 100, and between April 3rd and 10th it varied between 100 and 80. The accompanying chart shows this as well as the subsequent changes in the pulse until after his last attack of tachycardia. The pain in the bruised parts gradually subsided, but on April 5th, two days after the accident, he complained of severe abdominal pain and was sick three times; he had also hiccough and a great deal of flatulence. On April 7th and 8th he was more comfortable, but on April 9th he began to complain of an aching pain over the heart, with a good deal of flatulence and abdominal distension, and his pulse became rather weak, intermittent and irregular. On April 10th, just a week from his accident, Mr. Coombe and I saw him together. We found him in the condition described, with considerable gastric and intestinal distension. The heart was apparently of normal size, free from murmur, but with rather feeble sounds. There was slight pulmonary emphysema but no other lung trouble. The urine was normal. A mixture containing bismuth, soda, carbolic acid, and nux vomica was ordered and a simple aperient.

During the day (April 10th) the pulse became very unsatisfactory, and Mr. Coombe asked me to see him again in the afternoon. The pulse was then very small, irregular, and intermittent, running about 100, and the patient was pale and perspiring. There was no dyspnoea, no distension of the veins in the neck, no sign of cardiac dilatation. There was no murmur or friction to be heard, only rather feeble sounds. He still complained of aching over the heart. He was ordered $\frac{1}{50}$ gr. of strychnine hypodermically every four hours with this four-hourly mixture: R Spt. aetheris nitrosi, spt. am. aromat., tinct. lavand. co., āā ♏ xv, aquam ad ℥j; also a tablespoonful of whisky every six hours. Under this treatment the pulse improved somewhat, remaining, however, very intermittent. Next day (April 11th) it rose further in frequency, and at 2 p.m. was running at 144. Small doses of digitalis were now given, and these reduced the rate as counted at the wrist. But this apparent reduction was only due to the digitalis increasing the number of beats which did not reach the radial artery, so on April 13th strophanthus was substituted, with small doses of ammonium bromide.

On the evening of April 13th the right saphenous vein became thrombosed. The pulse was then counted at 180. Next morning it was counted at 74. Cheyne-Stokes breathing was very marked on April 14th, and occurred occasionally for several days.

From this time until April 21st a very serious condition was maintained, the rate of the pulse varying greatly from time to time, as the chart shows, but being usually excessive, and often very rapid. At no time was there dyspnoea, cardiac dilatation,



PULSE CHART.—A, Accident. B, Binder applied. C, (?) if real rate so intermitting. D Real rate E, Pulse intermitting. F, Pulse feeble, very irregular, and intermittent. G, Pulse regular. H, Pulse irregular and intermittent. I, Pulse feeble, irregular, and intermittent.

or murmurs, distension of veins, or oedema, except in the thrombosed leg.

Nutrient enemata, with limited liquid food by the mouth, were begun on April 11th, and continued until April 18th, the liquid diet being kept up until April 19th, when solids were again cautiously begun. On April 21st he was extremely ill, and then for the first time I observed that during full inspiration the feeble, rapid pulse became absolutely obliterated. Mr. Russell Coombe confirmed this observation. I then decided to try the effect of abdominal compression, and a stout flannel binder was tightly applied all over the abdomen at 11.40 a.m. No other change was made in the treatment. No immediate improvement was noted in the condition; at 2 p.m. the pulse was 150; at 6 p.m., 146; at 10 p.m., 146. But at midnight it had fallen to 88, and was more regular; at 3 a.m. it was much stronger (64), but intermittent; at 5.45 it was again rapid (about 140), and at 10 a.m. it had dropped to 72.

A nearly liquid diet was resumed. From this time forward the pulse returned to an ordinary rate, stronger and not intermitting. On April 26th, the binder was loosened. On April 27th solids were cautiously begun again. On April 29th he was so much better that he was allowed to be propped up in bed for an hour. At first this caused some intermission of the pulse, but the effect soon passed off. On the succeeding days no intermissions were observed. On May 2nd he was propped up for two hours, and on May 3rd for a little over three hours. On May 5th he sat out of bed for nearly two hours, and seemed none the worse for it. His pulse had been excellent for days. On May 6th he was carried (in bed) into a larger room. There was no jolting or indeed any disturbance of the patient, but his pulse rose soon after to 132. There had been a delay in giving him an enema that morning, and the rise of pulse was attributed to that. This rate was maintained till the afternoon, when it again fell to normal. At the same time the patient complained a good deal of "indigestion." At 3.30 a.m. the pulse rose to 146 and remained at that for almost an hour, then falling to 90. At 5 a.m. it was 84, small, and regular. I again applied the abdominal binder, in the hope of preventing further accelerations, and noticed that the pulse at once slightly increased in size. After this the rate remained natural, but the pulse was not so good as before. That day some oedema and pain were observed on the back of the right hand, and a few days later a similar swelling affected the left hand.

The binder was loosened after a few days. On May 10th some venous thrombosis took place in the left leg, below the knee, with a great deal of pain. The tachycardia returned on May 12th, having been heralded for some days by occasional intermittence. He was now again extremely ill, very pale and grey looking, perspiring freely, the pulse very small and flickering, intermittent and irregular. At one time it seemed scarcely possible that he could survive. An enema of strong coffee did some service. So pale was he that I thought it worth while to examine the haemoglobin value of the blood. It was normal, as was the blood in other respects. Digitalin was tried on May 13th, and on May 14th, when he was again desperately bad, digitalis was prescribed with ether and strychnine. This undoubtedly did good, but did not control the tachycardia in the least.

On May 16th, at 5.30 a.m. the pulse was 164—very bad indeed. An enema of strong coffee seemed to pull the patient together, and the pulse gained in strength. At 9.30 a.m., the pulse being then 164, a binder was very tightly applied by Mr. Coombe. In a quarter of an hour the pulse fell to 96, regular and good, with only occasional intermissions.

This was the last attack of tachycardia. At the same time he was put on the following mixture: ℞ Tinct. strophanth. ♏ v, ammon. bromid. gr. v, spt. ammon. arom. ♏ xv, spt. aetheris nitrosi ♏ xx, tinct. lavand. co. ♏ xv, aq. ad ℥j, every four hours; and from this date improvement was continuous.

On May 23rd the patient was well enough to be taken home to London. He had a troublesome attack of boils soon afterwards, but except for occasional very slight pulse acceleration, he progressed slowly and uneventfully. Dr. Harper tells me that he is now "wonderfully well, and beyond occasional slight pulse acceleration, generally connected with indigestion, there has been no attempt whatever at a tachycardia."

About the gravity of the patient's condition during the continuance of the tachycardia there could be no sort of doubt. Mr. Russell Coombe, Dr. Harper (of Rosary Gardens, London, his usual medical attendant), my colleague Dr. Henry Davy, and Sir Clifford Allbutt, who saw him with me at various times, all agreed as to its extreme seriousness.

His attacks seemed clearly in some way consequent on his accident; also on his flatulent indigestion. I fancied that a decrease in the amount of fluid ingested tended to increase his liability to tachycardia. The temperature throughout was normal except at the time of each attack of thrombosis, when, however, it only rose very slightly.

I have refrained from calling the case one of "paroxysmal tachycardia." So many diverse conditions have been described by that name that it has ceased to have any precise significance. It was first applied, and, I venture to think, its use should again be restricted, to those cases in which, without discoverable cardiac lesion, and often without obvious reason, a normal pulse-rate suddenly or almost suddenly rises to a very high frequency, maintains it for minutes, days, or weeks, and then suddenly or almost suddenly returns to its original pace. Such cases are altogether different from the present one.

With regard to the inspiratory obliteration of the pulse, the so-called "pulsus paradoxus" (a term which surely ought to be given up), one cannot be expected to acquiesce in the present attitude of needlessness of explanation. If the phenomenon means anything in a case in which heart and lungs are free from demonstrable disease, it surely must indicate that the left side of the heart is so imperfectly supplied with blood that the intrathoracic suction action of inspiration, resisting outflow from the chest, is sufficient to greatly lessen the outgoing current. It was in this sense that I interpreted it. The pale livid face and hands suggested arteries half empty. The blood itself was normal. Where, then, was the blood? One could only suppose that it was ponded in the splanchnic area, much as most people believe it to be in surgical shock. To determine the state of the blood pressure I used a Potain's sphygmomanometer during his last attack (one recognizes its defects, but a Riva Rocci seemed undesirable in his state), and found that the pressure was only 100 mm. on May 15th.

In surgical shock the pulse-rate may rise to an uncountable point.

The effect of the binder I think can best be explained by its effect on the overcharged splanchnic circulation.

There are a considerable number of cases on record in which treatment directed to emptying the splanchnic vessels—compression of the abdomen in various ways, even inversion of the patient—has reduced the excessive rate of the heart to normal. Sir Clifford Allbutt refers to this in his interesting article on the subject in the last edition of his *System of Medicine*, and references to a number of instances will be found in Professor Hoover's article in Osler and McCrae's *System*.

How great may be the effects of a sudden opening of the splanchnic flood-gates I once had an opportunity of seeing, and, as the case has not been published and the explanation of such cases has not hitherto, so far as I am aware, been given, I may briefly mention it here.

A patient with left-sided empyema—not under my care, by the way—was having the empyema washed out, when he suddenly became faint and quickly died, with the appearance of one suffering from a rapid internal haemorrhage. At the *post-mortem* examination we found no haemorrhage. But the abdominal organs presented an appearance such as I have never seen before or since

—the solid organs swollen and purple with excess of blood content, and, when cut, running out like overfull sponges. The splanchnic nerves, it will be remembered, run down within the thorax.

If paroxysmal tachycardia can be really determined by dilatation of the splanchnic area and the consequent greatly diminished supply of blood to the left ventricle, it is easier to understand the usually sudden manner of its inception and termination.

Other remedies suggested for paroxysmal tachycardia are atropine (by Dr. Herringham) and vascular dilatants (by Sir James Barr). It is interesting to note that, although in this case the blood pressure was low, yet the patient seemed to do decidedly better when on a mixture containing spirits of nitrous ether.

A RED LINE ON THE GUMS.

BY

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DURING the last three years it has been my privilege to examine a very large number of men (about 900) employed at works in which lead ores are handled, and with such an opportunity one would not be surprised at the possibility of finding some new feature associated with the poisoning symptoms classified under the heading of "plumbism."

It is astonishing what a large number of cases have been placed in the category of plumbism since the passing of the new Compensation Act, which, under circumstances associated with fewer temptations, both to the workman and his doctor, would most probably have been put down to alcohol, syphilis, rheumatism, or some such disease.

The workmen are drawn from a stratum of society composed of unskilled persons, who have been brought up amidst surroundings that do not conduce to any mental or moral elevation, with the result that their resistance to temptations of an alcoholic nature is of the feeblest. With a diminished income due to alcoholic excess, this class of workman does not obtain the necessary quantity of proper food to enable him to resist disease, which, if it be associated with the blue line on the gums, is most likely classified as plumbism.

What is this blue line? In a large number of the older "hands" one nearly always see a dark, dirty line, which, with the application of a suitable tooth powder on a good toothbrush would rapidly disappear; this is not the lead line. The typical lead line is seen to be just under the surface of the edge of the gum, and situated in the papillae, and under a magnifying glass presents an interrupted appearance. These papillae in some cases become enlarged almost to the extent of rupture, and the question naturally arises, What is the cause?

The following case is very interesting as bearing on the question:

A. B., aged 29, has been engaged at the same works for about ten years. On August 2nd, 1909, he lost the sight of his left eye, which had only troubled him for a few hours previously by becoming excessively watery. He gave a history of an attack of colic (which may have been due to lead) in May, 1909, but which did not last long.

He is rather anaemic; the left eye is damaged by a haemorrhage into the anterior chamber, which completely interferes with his sight. There is no paralysis. On testing the saliva the potassium sulpho-cyanide reaction is well marked, and to those who have had much experience of this test such a fact will be surprising. On the gum is a marked blue line, with which is associated a line of very enlarged papillae, in many places enlarged to the extent of rupture.

Is this engorgement due to the presence of lead in the system? About two years ago, when examining the men at a works in the district, I was particularly struck with the fact that a large percentage *of their gums showed a distinctly red line*, in marked contrast to the men at other similar works, so much so that I drew the attention of Dr. Legge, of the Home Office, and Dr. Collis, one of the inspectors, to the matter, and the latter has corroborated my observation. This red line is, in my opinion, due to an enlargement of the papillae at the edge of the gum, and, peculiarly enough, was seen in lads who had been only fourteen to twenty-eight days at the works, as well as in the outside men, such as masons, whose contact with the fumes occurred only when the latter were diluted.

The works are situated on the bank of a river, and are nearly surrounded by works of many sorts, so that the atmosphere is most probably charged with particles of an irritating nature, and no doubt it is this source of irritation, especially in the case of boys newly arrived at the works, that causes the engorgement, to which the lead finds its way, and on which it leaves its mark.

The conclusion that one naturally arrives at from such facts is that the so-called lead line is no proof of lead in the system, but that it appears in workers whose gums have been irritated by particles other than lead.

The Lettsomian Lectures

ON

THE CEREBELLUM AND ITS AFFECTIONS.

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON,

BY

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LECTURE III.

NON SUPPURATIVE ENCEPHALITIS.

NON-SUPPURATIVE encephalitis may occur in adults in association with infective diseases, but has been especially described in children after one or other of the acute diseases to which they are so liable. The mode of development of the acute ataxia in a child previously healthy, with the subsequent gradual improvement, after an attack of measles or some similar disease, are points that are highly suggestive of either encephalitis or acute degeneration, due to the action of some toxin on the nerve elements of the cerebellum. Such evidence cannot, however, be accepted without *post-mortem* confirmation, so that it is satisfactory to find that when some such cases have come to necropsy, although, as a rule, this has been at a remote period from the acute attack, the evidence of sclerotic changes in the cerebellum has been such as to justify the original diagnosis of encephalitis.

Prominent among those who have directed attention to this class of case in children is my colleague, Dr. F. E. Batten, who, in a paper on ataxia in childhood, brings out the main clinical features of the affection as it occurs in children. A child, previously healthy and of good physical and mental development, becomes ill of some acute febrile disease, which may or may not assume a definite recognized type, such as that of one of the exanthems. Loss of consciousness may supervene, but general convulsions are exceptional. After a few days, in which the child appears to be making a normal convalescence, it is sat up, but is found to be unable to maintain itself in this posture owing to loss of balance. The child's hands reveal marked incoordination, and, if supported on its feet, the lower limbs are found to be wildly ataxic. Moreover, some articulatory defect of speech may be noticed. The general health improves in the course of a few days, but the child continues ataxic for a time, after which recovery gradually takes place, and may be completed in a few months, or it may take two or three years before this result is reached.

Although the cases included in Batten's paper are open to the criticism that they are unsupported by any pathological data, in view of the fact that all the patients recovered, it will nevertheless be admitted that they are identical with other cases that have come to necropsy, in which evidences of encephalitis have been established.

No better example of this is to be found than in a case recorded by Clapton.

A child, aged 4 years, who had been previously healthy, was attacked by measles, after which she suddenly became unable to use her limbs or to talk. After remaining in more or less the same condition for about six months she began to improve, but even at the age of 15 her gait was still ataxic, and she could not use her hands properly. Death took place at the age of 33, when the cerebellum was found to be less than a third of the normal weight, and presented neuroglial proliferation, with

almost complete disappearance of the nerve elements of which the normal cortex is composed.

These cases must further serve to illustrate the fact that all cases in which encephalitis affects the cerebellum in childhood do not end in that perfect and complete recovery which resulted in a case published by Dr. Frederick Taylor.

A boy of 4 had fallen downstairs without seeming to be hurt eight weeks before he came under observation, and three weeks before he developed the following symptoms he suffered from whooping-cough. For three weeks his eyes had twitched, he had dropped things out of his hands, and he had been unable to walk. He was unable to stand unsupported, and was unsteady in the sitting posture. Lateral nystagmus was occasionally present. A special feature of the case was a trembling of the limbs and trunk, which resembled that seen in disseminated sclerosis. The tremors of the arms only appeared on attempts at voluntary movement, and were not violent or extensive, but quick and short. Vomiting occurred several times during the first fortnight that he was under observation, but then ceased, and repeated examination of the fundi failed to determine the existence of optic neuritis. During the next two months there was little change, but he subsequently improved, so that about eighteen months later he could walk on level ground, though in a very ataxic manner, his movements resembling exactly those of a drunken man, and not those characteristic of the gait of tabes. His arms were also ataxic. Scarcely any tremor was now noticeable in the head and neck. His speech was hesitating and his voice was not properly modulated, but he looked fairly intelligent, and he was lively and cheerful. Sensation appeared to be normal. In the course of the next two years he had improved so much that he was able to run and to bowl a hoop, although his speech was still a little imperfect, and when seen at the age of 33 so complete was his recovery that he was able to follow the calling of a clerk, and presented no sign of his former complaint, but was an active man, and included hockey among his recreations.

Most of the cases that have come to necropsy have done so at a period so remote from the original illness that sclerotic changes were alone determined, and supply the only justification for the assumption that an encephalitis had existed. A case recorded by Nauwerck, however, affords an illustration of what the acute changes may be in cases of the kind:

A girl of 19, who had been formerly healthy, except that she had previously suffered from otitis media after a transitory cold, with slight pains in the limbs, developed some headache, especially in the occipital region, fainting, and repeated vomiting. Her pupils were contracted and did not react to light, and the discs were normal. There were no cord symptoms, and her urine was free from albumen and sugar. Two days after the onset she had developed jactitations, with constrained positions of the limbs. Respiration became deep and very slow, and ultimately Cheyne-Stokes. There was groaning at times, and she experienced difficulty in swallowing. Death occurred four days after the onset of the illness.

At the autopsy the right cerebellar hemisphere was occupied by a walnut-sized apoplectic focus, consisting of black coagulum, the margins of which were irregular, and the walls formed by a greyish-red softened zone beset by small haemorrhages. The morbid changes extended across the middle line into the left cerebellar hemisphere, where there was a focus the size of a small hazel nut. On the right side the softening infiltrated the cortex over an area the size of a penny. The tympanic cavity was normal, as was the frontal sinus.

Another class of case which may be the outcome of an acute disease earlier in life is that in which there are evidences of chronic meningitis in addition to atrophy and a general sclerotic condition of the cerebellum, and in which epilepsy and mental enfeeblement may form part of the clinical picture. A case recorded by Hammarberg illustrates this:

A child who had previously been quite well fell ill with some form of severe cerebral inflammation at the age of 7. Following on the acute illness, he became ataxic, and presented continuous oscillations of the trunk and limbs, while all of his movements were slow and uncertain. Speech, which was lost for a time, was indistinct and scanning in character after its return. At the age of 24, the patient became subject to fits of mania, developed delusions, had some epileptic attacks, and died. The cerebellum was found atrophied and sclerosed, and the pia mater covering it was thickened all over. The frontal lobes of the brain and the left inferior olive were also the seats of patches of sclerosis.

VASCULAR LESIONS.

In considering the phenomena which characterize tumours of the cerebellum I took the opportunity of referring to the fact that vascular lesions are much less commonly responsible for disorders of function of the cerebellum than of the cerebrum. It must not, however, be supposed that they do not occur in the cerebellum. Nevertheless, in the vast majority of cases they prove of pathological rather than of clinical interest, because death has resulted so rapidly or under such conditions as have not allowed of cerebellar symptoms being determined, or that the lesions have been of such a character as could not be expected to give rise to a characteristic clinical picture.

The first class of case is supplied by haemorrhage, in which the patient dies rapidly owing to rupture of the blood into the fourth ventricle, or if living longer remains comatose, and does not permit of proper analysis of the symptoms in the way that might otherwise allow of information being obtained which might lead to a correct diagnosis.

The latter class of case is usually supplied by thrombosis, in which foci of softening determined on necropsy are so small and insignificant that they could not reasonably be expected to occasion characteristic symptoms during the patient's lifetime. This is to be accounted for by the free anastomosis of the cerebellar arteries, whilst the sources from which the cerebellum receives its blood supply make the occurrence of embolism altogether unlikely in the organ. These remarks are sufficient justification for my asking you to allow me to remind you of the sources from which the cerebellum derives its arterial supply. Not only does the cerebellum derive its supply from the basilar, but it also does so from the vertebrals before they unite to form the basilar sheath; whereas the superior cerebellar artery, which supplies the lower surface of the organ, and the anterior cerebellar, which supplies the inferior surface, are derived from the basilar, the inferior cerebellar, which also supplies the under surface and the posterior part of the upper surface, comes direct from the vertebrals. It will be readily understood that the free anastomosis of the vessels precludes the possibility of large areas of softening resulting from thrombosis as a rule, and that the cerebellar vessels are so fortunately placed in regard to the main trunks from which they are derived, that there is little likelihood that an embolus would become deviated from one of the main channels of the cerebrum to be lodged in the cerebellum.

The following vascular lesions are met with:

1. Haemorrhage.
2. Thrombosis.
3. Arterial degeneration with sclerosis of the cerebellum.

Haemorrhage.

What has been said in regard to haemorrhage must not be taken to mean that extravasations of blood never take place into the organ under conditions that permit of a correct diagnosis during the life of the patient, for this would not be true. The cases are, however, very exceptional in which the uncomplicated cerebellar syndrome is determined, for the reason that it so often happens that the haemorrhage is as much pontine as cerebellar, taking place in one of these seats and extending to the other. Premonitions that have been insisted on are headache, especially occipital, and giddiness; while, according to Nothnagel, haemorrhage in the cerebellum may be suspected if there be repeated vomiting at the beginning of the attack without the occurrence of any obvious motor paralysis. In an old woman, whose case was studied by Touche, vomiting a month before death was the only symptom, and yet there was a focus of haemorrhage in the centre of the left cerebellar hemisphere.

A case that illustrates what the effects may be in a patient in whom the haemorrhage is strictly confined to the cerebellum, without either involvement of the pons or rupture into the fourth ventricle, is supplied by Boldt:

Each cerebellar hemisphere was found to contain a haemorrhage about the size of a walnut, in a man aged 42, in whom severe general spasms were followed by a dazed condition, in which state the tendon-jerks were exaggerated and continuous clonic tremors were observed in the right extremities and lower part of the face on the same side. Two days later the eyes became divergent, there was definite dysarthria, cerebellar ataxia and Romberg's sign. Aphonia, great difficulty in deglutition, and Cheyne-Stokes breathing, preceded the fatal termination of the case, which occurred four days after the onset of the illness.

Another case which supplies an example of what may happen when the haemorrhage occurs into the middle lobe is supplied by Collett:

An extensive haemorrhage occurred into the middle portion of the superior vermis in a girl aged 19, who experienced difficulty in breathing, whose eyes deviated to the left, whilst the left half of her face was in tremor, and her arms and legs in constant movement. Six days later sudden spasm occurred, with cyanosis and arrest of respiration.

Another case, which is an example of how the cerebellar syndrome may result from haemorrhage into one of the peduncles, is one recorded by Porot:

The extravasation of blood was limited to the first part of the right superior peduncle. A man of 50 was attacked by vertigo and transitory diplopia, followed by the cerebellar gait, dysarthria, hemi-asynergy, ataxia and diadococinesia of the right arm, bilateral exaggeration of the knee-jerks, preservation of the superficial reflexes, and slight nystagmus on extreme turning of the eyes to the right.

The more usual state of things, however, is that the haemorrhage in the cerebellum is complicated by haemorrhage in the pons. Inglis and Fenwick met with a case of the kind:

A woman, aged 26, had old blood clot filling a cavity on the right side of the cerebellum, while a cyst the size of a pea, containing clear fluid, was situated in the posterior extremity of the pons on the same side. In this case, as in others of the kind, there was evidence of affection of the pyramidal tracts, as supplied by the extensor type of plantar reflex, while such partial hemiplegia as existed was on the contralateral side to the cerebellar and pontine lesions, as evidenced by the findings at the necropsy. Moreover, numbness of the left side of the face was one of her symptoms. She had frequently repeated purposeless movements which shook the bed, and she lay on her right side, and, when turned on to her back, turned her eyes and head to the right in a way that is contrary to what we know usually obtains in acute lesions of the cerebellum, in which there is deviation of the head and eyes to the opposite side, as obtained in a case published by Laignel-Lavastine and Halbron, in which haemorrhage into the right cerebellar hemisphere resulted in conjugate turning of the head and eyes to the left.

On the other hand, how haemorrhage may occur into the cerebellum without causing cerebellar symptoms is illustrated by a case published by Spiller, Robertson, and Wadsworth:

A woman, aged 37, was found to have a haemorrhage into the vermis and posterior portion of the fourth ventricle, without having had vertigo, convulsions, or any other symptoms to lead to this condition of things being suspected during life.

In a case published by Camille Lian there was generalized muscular weakness without alteration of the tendon jerks and superficial reflexes, but no characteristic symptoms pointing to the cerebellum, in a woman aged 60, in whom haemorrhage in the anterior and internal portions of the quadrangular lobe of the right cerebellar hemisphere existed, and the blood infiltrated the whole of the cortex of the superior half of the hemisphere and part of the cortex of the superior vermis.

Thrombosis.

While it is true that thrombotic lesions in the cerebellum are usually so small that they are discovered on necropsy without having caused any symptoms that could lead to their being suspected during life, exceptions occur, as may be judged from what obtained in a case published by Négel and Théohari:

In a man aged 50 the disturbance of equilibrium was so great that he was unable to stand upright without support, continuous oscillation of the body resulting on his attempting to do so, and there being a tendency to fall backwards. In this case, however, in addition to the chief focus of softening in the left hemisphere of the cerebellum, involving the white substance and nucleus dentatus, there were similar foci on the inner side of the occipital lobe, two on the right side of the pons and one on the left. He, however, presented no clinical evidence that would justify the belief that the pyramidal tracts were affected in the pons or elsewhere.

M. Thomas has also published a case in which, after thrombosis of the right vertebral and postero-inferior cerebellar arteries in a man of 58, there resulted vertigo, a tendency to fall to the right, ataxia of the right arm and tremors of both legs, slight ptosis of the right eye, the pupil of which was smaller than the left, transient lateral nystagmus, and difficulty in swallowing.

Arterial Degeneration with Sclerosis.

Yet another way in which vascular disease may lead to disturbance of cerebellar function is by the occurrence of a more diffuse process, with a great deal of neuroglial proliferation which leads to sclerosis. Few cases of the kind have, however, been proved by the discovery of histological changes in the cerebellum that can be ascribed to such vascular disease. One of the best established is a case recorded by Schultze:

The first symptoms were observed at the age of 39; they progressed rapidly, so that the patient died at the age of 43. A typical staggering cerebellar gait developed without Romberg's sign; there was slight nystagmus, intention tremor of his arms, and his articulation became slow and indistinct. Thus a clinical picture was produced which was similar to that which may result from a progressive degeneration of the cerebellum, in which vascular disease cannot be blamed for the morbid changes or the clinical picture to which they give rise. In reality, however, in this case, as in a few others of a similar kind, abundant evidence of vascular disease and its consequences were forthcoming on necropsy.

The cerebellum was found considerably atrophied, and presented patchy sclerosis. The Purkinje cells were greatly reduced in number, and those which had not disappeared were nevertheless atrophied. The molecular and granular layers were only slightly affected. The central nuclei shared in the changes, and were thus atrophic. The white matter was greatly destroyed, the lesions being both focal and diffuse, with a great deal of sclerosis due to neuroglial proliferation, and the vessels were diseased. The superior cerebellar peduncle was degenerated, and atrophic changes, probably secondary to the disease of the cerebellum, were determined in the olives, middle peduncle, and transverse fibres of the pons, whilst the spinal cord was normal.

DEGENERATIONS OF THE CEREBELLUM.

Before dealing with the degenerations which may result in the cerebellum it is necessary for me to remind you of a few points in connexion with the structure of the cortex of the organ, in addition to those anatomical details to which I directed your attention in the first lecture, for these, you will remember, only related to the separation of the cortex from the intrinsic nuclei, and to the connexions which exist between the organ and other parts of the central nervous system. No reference was made to the actual minute structure of the cortex.

Structure of the Cortex of the Cerebellum.

The cortex consists of two layers, an inner or granular, which is best considered first, in that the neurons of the small nerve cells of which it is composed, and which are spoken of as granules, send their axons vertically towards the surface to reach the outer or molecular layer, where they are found to be continuous with horizontal fibres which run between the cells of this layer. The cells of the molecular or outer layer are not so small as those of the inner layer, and they are not so numerous, so that they are more scattered. Between the outer and inner layers the cells or corpuscles of Purkinje are to be seen. These are large flask-shaped cells, whose dendrites branch in antler fashion, forming another constituent of the outer or molecular layer.

The following groups of cases of degeneration of the cerebellar system have been established:

1. Parenchymatous degeneration of the cerebellum.
2. Olivo-ponto-cerebellar atrophy.
3. Degeneration of the spino-cerebellar tracts.

Parenchymatous Degeneration of the Cerebellum.

Since Marie's publication in 1893, when he collected certain cases which presented more or less similar clinical features, from which he constructed a clinical picture that was regarded by him as characteristic of a group to which he applied the term "hereditary cerebellar ataxia" (*L'Hérédo-ataxie cérébelleuse*), many writers have followed his teaching, and it has become an accepted fact that a group of cases exists in which primary disease of the cerebellum leads to a very definite and characteristic clinical picture, which is not to be confounded with that of Friedreich's ataxia, in which the clinical phenomena are to be ascribed to changes in the afferent cerebellar tracts in the spinal cord rather than to disease of the cerebellum itself. Much as we are indebted to Marie for his paper, which called attention to the possibility that such a group of cases exists, and odd as it may seem, in only one of the cases on which his description of the affection was based has any morbid condition of the cerebellum been revealed by necropsies subsequently performed in the cases, and even in that case the morbid changes were not strictly limited to the cerebellum, in that there was optic atrophy.

True as this is, it nevertheless happens that investigations stimulated by his contention have resulted in establishing beyond question the existence of cases in which, with a clinical picture of ataxia, primary degeneration of

the cerebellar cortex has been found to account for the condition without any co-existing degeneration of the afferent cerebellar tracts in the spinal cord. No better illustration of this class of case is to be found than that published by Gordon Holmes:

A man aged 53, from a family of eight, of whom four were similarly affected, and in each of whom symptoms of the disease set in between the ages of 33 and 40 years. Two brothers and a sister were the other members of the family affected, and all of them had been in the Marylebone Infirmary under Dr. Lunn's care, where the patient died at the age of 70, and afforded Holmes the opportunity of making a histological examination of his nervous system.

At about the age of 35 he began to be unsteady in walking, and this became progressively worse, while by the time he was 40 his hands were very unsteady and uncertain in their movements, and soon after this his articulation began to be altered. He was small but well built, and, as in the case of the other members of the family affected, the tonsils were small, as were his genital organs, and beyond his eyelashes he had no hair on his face and very little on his head. He had never required to shave. Nystagmoid jerks were evoked on lateral turning of the eyes to either side. His pupils were equal, and reacted to light and accommodation. His optic discs were normal. There was some tremor of his head when unsupported, and his upper limbs also revealed tremor, in addition to ataxia and uncertainty in their movements. His gait was unsteady and reeling, like that of a drunken man. Romberg's sign was nevertheless absent. No disturbance of sensation was reported; the knee-jerks were brisk. He ultimately became bedridden, and unable to stand or walk without support. His articulation was slow, jerky, and explosive, and there was marked nystagmoid jerking of the eyes, especially on lateral movements. The facial muscles showed considerable excess of contraction when he spoke, as is so often seen in Friedreich's disease. Volitional movements of his limbs were poorly co-ordinated, though not unduly weak, the ataxia resembling that seen in Friedreich's disease. His tendon jerks were brisk, and there was no disturbance of sensation or of the special senses.

Examination of the central nervous system after death showed marked more or less uniform reduction in the size of the cerebellum, which was unduly firm in consistence. On microscopical examination the molecular layer of the cortex was found markedly reduced in breadth, and the majority of its cells had disappeared, while it had undergone some sclerosis, which was most marked in its deeper part, which borders on the intermediate zone in which the Purkinje cells are situated. These cells had entirely disappeared throughout the greater part of the cerebellum, and even where present they were much reduced in numbers. Neuroglial proliferation and sclerosis replaced the Purkinje cells that had disappeared. The cells of the granular layer had also disappeared to a variable extent, which led to marked rarefaction of this layer. Secondary to the nerve cell degeneration was a slight degree of neuroglial sclerosis. The white matter of the folia was greatly reduced in size, and revealed a considerable amount of sclerosis. The intrinsic nuclei of the cerebellum were about normal in size, and their cells were normal for a man so old as the patient was when he died, so that the well-preserved intrinsic nuclei presented a striking contrast to the degenerated cortex in sections in which both parts were visible at the same time. The superior cerebellar peduncle was intact, and did not show the slightest degree of degeneration or atrophy, a description which applied also to the middle peduncle and transverse fibres of the pons. The restiform body (inferior cerebellar peduncle) was, however, reduced to about half its size, a state of things to be accounted for, in part at any rate, by the fact that the inferior olives were markedly affected, so that the olivo-cerebellar fibres were naturally degenerated, and had disappeared from the restiform body. The affection of the olives was secondary, and had nothing to do with the production of the symptoms, so that the case may be looked on as a typical example of what may be expected from the clinical point of view in a case in which degeneration is limited to the cerebellum. No degeneration or other change was detected in the grey matter of the medulla, where all the nuclei, including those of Deiters and Bechterew, were intact. The cells of the tegmentum of the pons were also unaffected, and no evidence of sclerosis was detected anywhere in the pons or mid-brain. The red nuclei and optic thalami were normal, as were the crura cerebri and internal capsule, while the cerebral cortex was also free from degeneration, except that there was a pigmentation of cells, common to people of the patient's age, and perhaps a slight reduction in the size of Betz's giant cells of the precentral area. The optic nerves presented no sign of degeneration or atrophy. The spinal cord was absolutely intact, except for such changes as may be seen in the cord of any old person affected with arterio-sclerosis, as were the dorsal and ventral roots and the dorsal root ganglia, and such peripheral nerves as were examined.

It is clear, then, that a primary and progressive degeneration of the nerve elements of the cortex of the cerebellum was responsible for the clinical picture in this case, and that although the nervous systems of the two brothers and the sister were not subjected to the exhaustive examination which was made by Holmes in this case, the clinical features were so identical in all four of the patients that it is permissible to suppose that the pathological basis was also the same in them all. The familial nature of the disease and the existence of congenital or developmental anomalies in the family are special features to be noted, while these anomalies make it probable that the selective disease of the cerebellar cortex was primarily due to a hereditary defective vital endurance or a tendency to degeneration of these tissues, which began to fail from the middle of adult life.

That such cases of progressive degeneration may date from childhood is suggested by the cases of progressive ataxia met with in children, and is proved by the cases of a brother and sister studied by Fraser.

These patients were affected from early childhood, and became progressively worse as they grew older instead of improving, in the manner seen in so many cases of ataxia in children. They presented a staggering cerebellar gait, with inco-ordination of the upper limbs, tremor of the head, nystagmoid jerking of the eyes on lateral deviation, primary optic atrophy, strabismus that was possibly congenital and articulatory disturbance of speech, while vertigo was a further symptom in one of the cases. Examination of the cerebellum of the male patient showed that the organ was markedly reduced in size, and the cortex was atrophied to about half the normal depth, Purkinje's cells having disappeared in greater part, while the few remaining were shrunken and atrophied. The spinal cord appeared to be normal, but was not subjected to microscopical examination.

Olivo-Ponto-Cerebellar Atrophy.

To Thomas we are chiefly indebted for most of the knowledge which we possess of another type of cerebellar ataxia, which has also been investigated by Déjerine, in which the clinical picture closely resembles that to which attention has just been called, but in which, in addition to degeneration of the cerebellar cortex, there is simultaneous degeneration of the grey matter and fibres of the pons and of the inferior olives. Although there may be slight differences in the clinical pictures of the three cases on which his description of the affection is based, in the main the conditions were the same, and the principal outstanding feature was marked disturbance of equilibrium in the typical cerebellar *démarche ébrieuse*. The individual movements of the lower limbs were not as ataxic, and only one of the cases showed any affection of the arms, intention tremor being the defect noted in this case. Romberg's sign was not present. The articulation was slow and scanning in all of the cases, and two of them presented nystagmus.

The pathological basis determined to account for the clinical picture was the same in all of them, although in one it was complicated by disseminated sclerosis, which was regarded as quite accidental and independent of the other morbid processes. The essential changes consisted in atrophy of the cerebellar cortex, which was severe, though not uniform either in distribution or in degree, practically complete degeneration of the inferior olives, the nuclei of the pons and its transverse fibres, both here and where they constitute the middle peduncle of the cerebellum, while the restiform body (inferior peduncle) revealed only partial degeneration. Nowhere in the degenerated parts was anything but very slight neuroglial sclerosis determined, thus stamping the changes as due to primary degeneration of the nervous elements. The central nuclei of the cerebellum were relatively intact, and the spinal cord revealed no degeneration of the afferent cerebellar tracts nor any other changes, except that in two of the cases the crossed pyramidal tracts were slightly pale. Although, as in the other type already described, the affection does not make itself manifest until an advanced age, and presents no evidence of any hereditary tendency, it differs in further showing no familial tendency, which was so prominent a feature in the other cases.

Degeneration of the Spino-Cerebellar Tracts.

It has long been recognized that the clinical picture of cerebellar ataxia may have as its pathological basis an affection of the spino-cerebellar system instead of disease of the cerebellum itself, and the best established cases of the kind are those included under the title of Friedreich's ataxia, in which the afferent cerebellar tracts, both dorsal and ventral, are degenerated, and in which the cerebellum is intact.

Some observers have, however, suggested that the organ is affected in conjunction with the spinal cord in some of the cases, and there are those who regard this affection as but one variety of a common disease, which may affect the cerebellum or spinal cord. Raymond accordingly considers that various intermediate links can be established between Friedreich's disease and Marie's hereditary cerebellar ataxia.

As has already been explained, however, most of the cases on which Marie based his description of hereditary cerebellar ataxia, and in which defect of the cerebellum was supposed to account for the clinical picture, fall under a group of cases in which the cerebellum is in reality intact, but in which, nevertheless, the dorsal and ventral cerebellar tracts, together with Clarke's column in the spinal cord, are affected in a way that makes the cases more closely linked to Friedreich's disease than to any affection of the cerebellum. The explanation of how Marie's supposed cerebellar ataxia is in reality accounted for by affection of the spinal cord is supplied by the fact that only two of the cases on which he based his description had come to necropsy when his paper was published, and that all of those that have allowed of histological examination since have presented morbid changes in the spinal cord, while the cerebellum has been intact.

In illustration of this I cannot do better than refer you to the well-known cases of Sanger-Brown, as they were included in Marie's description in the type of disease in which the spinal cord was not supposed to be affected, whereas the cerebellum was, and in which in reality those of the cases that have come to necropsy since then and have been examined by Meyer and Barker respectively have all shown the reverse to be true.

Twenty-one cases were observed in four generations of one family, and the clinical manifestations of the malady most commonly appeared between the ages of 16 and 35. Ataxia was the outstanding feature in the symptomatology, and first affected the legs, then the arms, then the muscles of the face, eyes, head, larynx, and pharynx. A reeling cerebellar gait resulted, but Romberg's sign was absent. Attempts to keep the head or limbs in fixed positions by voluntary effort resulted in choreiform movements of these parts. Palsies and subsequent spastic contractures developed, and the tendon-jerks were exaggerated, but sensation was not affected. There were no deformities other than those produced by the spastic contractures. The pupils were defective in their reaction to light, and optic atrophy was present.

In the three cases examined histologically the cerebellum was practically normal, except, perhaps, a slight diminution in the number of Purkinje's cells. Marked changes were, however, found in the spinal cord, in which the dorsal cerebellar tracts and Clarke's columns were completely degenerated, and the ventral tracts of Gowers slightly so. There was, in addition, degeneration of the middle-root zone in the dorsal columns, and ascending degeneration of Goll's columns.

CONGENITAL DEFECTS.

Few morbid conditions of the cerebellum are of greater interest than congenital defects of the organ. These may be conveniently described as falling into one or other of three groups:

1. Cases in which the cerebellum as a whole is small, but otherwise normal in structure.
2. Cases in which the cerebellum is more or less uniformly reduced in size, and in which histological changes can be determined in connexion with its minute structure.
3. Cases in which there are all sorts of gross defects, amounting, it may be, to what is practically absence of the organ, so rudimentary may be its sole representative.

Congenitally Small Cerebellum of Normal Structure.

Cases that fall into the first group are of interest for the reason that a congenital defect of the kind has been held responsible for the clinical picture of cerebellar ataxia, such as is to be accounted for by degeneration of the cerebellum alone or in conjunction with the nuclei of the pons and the inferior olives in some cases, and by degeneration of the spino-cerebellar system of tracts in others. That persons affected in this way should reach adult life without revealing any of the clinical abnormalities by which cerebellar defects are recognized is not in the least surprising, in the light of what may similarly obtain in cases of gross defects of the organ, and in view of the provision for compensation of cerebellar inadequacy to which reference was made in our second lecture. What, however, is difficult to accept in these cases is a congenital inadequacy of the cerebellum which has existed from birth until adult life is reached, should then be held responsible for a clinical picture in which cerebellar symptoms develop and become progressively worse until a fatal termination is reached without evidence of regressive changes in the organ being detected on histological examination. Nevertheless such is held to be the case, as is illustrated by two examples recorded by Miura:

Two brothers suffered from symptoms of cerebellar defect, which commenced at the ages of 25 and 35 respectively. The gait became reeling, articulation explosive and stuttering, the face showing a vacant and stupid expression. Sight became dim, and in one of the cases there was nystagmus. The limbs became ataxic, tremulous, and weak, while the reflexes and sensation remained intact. Only one of the cases was examined *post mortem*, and beyond the fact that the cerebellum was small (only half the normal weight), as was the brain stem and spinal cord, no abnormality in the shape of degeneration or regressive changes could be detected on microscopical examination.

A similar state of things obtained in three brothers, whose cases are described by Nonne:

The cerebellar symptoms commenced at the ages of 10, 14, and 30 respectively, became progressively worse, and were accompanied by optic atrophy. Histological examination of the central nervous system failed to determine any morbid change in any part of the nervous system, which was, however, small as a whole. The cerebellum and brain stem were less than three-quarters of the normal. In one of the cases the spinal cord was abnormally small, but not in the others.

Congenitally Small Cerebellum with Histological Changes.

That congenital abnormalities of the cerebellum may, however, occasion disturbance of function without the defects being of the gross character which obtains when nearly the whole or a part of the organ is absent, is evidenced from what I was once able to determine in a puppy from a litter in which all were similarly affected. In this class of case, although no gross macroscopic defect is evident, microscopical abnormalities can nevertheless be determined, as contrasted with the cases included in the first group, in which no such structural alterations are evident.

There was marked disturbance of co-ordination in the animal, so that attempts at walking resulted in its falling first in one direction and then in the other. There was almost constant oscillation of the head and trunk when the puppy was sitting or standing. It was killed, and its cerebellum was found to be about three-quarters of the normal, but with no gross external defect apart from the general reduction in size. On microscopical examination, however, pronounced changes were found in the cortex of the organ, where Purkinje's cells were absent in a large part of the cortex, and when present were heaped up into masses which extended into the granular layer. The molecular and granular layers were very irregular in breadth, being increased in places and diminished in others, and the appearances generally were difficult to explain, except as the result of a congenital defect.

Southard has met with a somewhat similar condition of things in an imbecile who was epileptic, which he also regarded as a congenital defect. His patient does not appear to have presented cerebellar symptoms during life.

In the absence of pathological evidence it is, of course, impossible to say whether any of the cases described by Batten as congenital ataxia were to be accounted for by such anomalies, or whether a mere delay of development of the cerebellum without structural changes is responsible for the clinical picture. The condition is characterized by marked unsteadiness of the head, trunk, and limbs, with in consequence inability to perform movements, except in an ataxic manner, and as a result inability to stand, but falling at first, while, when able to walk, the gait reveals marked ataxia. Articulatory disturbances of speech, with slowness and difficulty in swallowing, complete the clinical picture, which improves in time, so that a child who at the age of 2 is unable to walk owing to ataxia, can nevertheless do so at the age of 4, although probably not perfectly even then.

Gross Congenital Defects of the Cerebellum.

Cases that fall into the third group, in which there are gross defects of the cerebellum, are chiefly of interest as illustrating how pronounced may be the congenital defect without notable clinical symptoms, as evidenced by the fact that some defects have been discovered *post mortem* when no suspicion of the condition had been entertained during the life of the patient.

I cannot better illustrate this than by reference to a case, the notes and photographs of which Dr. Shuttleworth has very kindly placed at my disposal. He writes that, stimulated by my lectures, he has been induced to look up the records of a remarkable specimen of defect of the cerebellum which he met with at the Royal Albert Asylum twenty-six years ago, and which is described by Dr. Ferrier in his book on *The Functions of the Brain.*

The case was that of a female imbecile, aged 15, the subject of phthisis, of which disease both of her parents had died. There was nothing peculiar in her appearance, and nothing remarkable in the shape and size of her head. Her palate was very narrow and deeply grooved, but not cleft, and to this condition was ascribed an indistinctness of her speech. She had never menstruated or shown any sexual tendencies, and her generative organs, though present, were like those of a child. There was general feebleness of intellect, but her imbecility was of a slight character, and there was every reason to suppose that she would have been capable of considerable education had she lived. The special senses were unaffected. There was no paralysis, and she could walk well and steadily. Moreover, she could sew and knit, although there was some tremor of her hands and inability to thread her needle. She could not carry a vessel containing any liquid without spilling some of it, attempts to pour water from a jug were attended by a similar result, all of which showed that there was some, though very slight, inco-ordination in her upper limbs.

Cerebellar defect was unsuspected during life, but on autopsy an exceedingly rudimentary state of the organ was found. No abnormality could be detected in the cerebrum, which was well developed, but the cerebellum was of the most diminutive character. The left lobe was a mere papilla, the vermiform process a minute nodule obscurely marked with laminae; while the right lobe, which constituted the main portion, was only half a square inch in superficial area and only a quarter of an inch in thickness at its base.

The pons was indicated only by a few transverse fibres, which barely concealed the pyramidal tracts in their course from the foot of the cerebral peduncles. The corpora quadrigemina had a normal size and appearance. The olivary bodies of the medulla oblongata were only obscurely indicated. With the exception of the cerebellum and its peduncles, which were reduced to insignificant dimensions, the rest of the brain and all the cranial nerves were perfectly normal in appearance.

Other cases have, however, presented very distinct cerebellar symptoms, which have permitted of a correct diagnosis during the lifetime of the patient; but even in these they have not been of such severity as we should have been warranted in expecting had we not been prepared for the compensation of cerebellar defects with which we are so familiar. Many such are on record, but the following from more recent literature will serve in illustration:

The case is that of a child 6 years old, who presented disturbances of equilibrium and diminution of vigour of all movements, but Anton, who records the case, considered the functional disturbance but slight when compared to the defects met with on necropsy, and thus concludes that other parts of the brain perform a compensatory function, becoming anatomically hypertrophied to permit of this. In the position of the cerebellum was merely a gelatinous membrane covering the fourth ventricle, microscopical remnants of cerebellar tissue existing only at its margin. The inferior olives were absent, and there were only traces of the red nucleus and superior cerebellar peduncles. The restiform body was very rudimentary, and the direct tracts between the cerebrum and cerebellum in the peduncles were absent. There was excessive development of the funiculi gracilis and cuneatus and the gelatinous substance of the trigeminus, while the cerebral cortex was disproportionately wide and the optic thalamus comparatively large.

CEREBELLAR SYMPTOMS IN GENERAL DISEASES OF THE NERVOUS SYSTEM.

There remains for our consideration what may be described as the colouring which defects of the cerebellum may give to the symptoms of some general affection of the nervous system, and which may materially alter the usual clinical picture of the malady, even to such an extent as to lead to errors in diagnosis.

Cerebral Diplegia.

An example of how this may come about under circumstances that are unimportant is supplied by cerebral diplegia, in which the ordinary clinical picture of the affection may be materially modified by the addition of cerebellar symptoms. Two cases recorded by Freund as examples of cerebral diplegia illustrate this, for prominent among the symptoms were those which have been described by Batten as characteristic of congenital ataxia. It seems reasonable to suppose, as Batten has suggested, that the cerebellar symptoms that can be determined in such cases are in reality due to the concomitant affection of this organ in addition to the cerebrum, and not to affection of the latter without involvement of the cerebellum. We must, however, be content to wait for pathological proof of this before we can permit ourselves to arrive at any positive conclusion on a subject of the kind, although the cases recorded by Batten—in which, from pure cerebellar ataxia to cerebral diplegia, a variety of transitional forms are traced, in which evidence of affection of the cerebellum and cerebrum can be determined in varying degree—are very suggestive.

Disseminated Sclerosis.

Disseminated sclerosis supplies another example of a general disease of the nervous system whose clinical picture may be considerably modified by the addition of cerebellar symptoms. Indeed, so pronounced may be the cerebellar symptoms that the clinical picture of the malady becomes readily confounded with the progressive ataxia that is due to degenerative disease of the cerebellum or to the spino-cerebellar system. That the opposite mistake of regarding as disseminated sclerosis what is in reality a disease of the cerebellum or of the spino-cerebellar system has been often met with, is abundantly evident from a review of the diagnoses in cases of these affections that have come to necropsy. Except for the importance of scientific accuracy, however, errors of diagnosis are not material in so far as these conditions are concerned, but it is nevertheless most important that we should make a careful study of all such cases, as well as those which present a more typical picture, and are more easy to recognize as produced by one as opposed to the other of these diseases, for it sometimes happens that disseminate sclerosis is diagnosed when cerebellar tumour exists, or vice versa. The importance of arriving at a correct diagnosis under these circumstances is too evident to need further emphasis in the light of the brilliant achievements of modern surgery, where tumours of the cerebellum are concerned.

No lengthy discussion of the differential diagnosis of these two conditions is possible in the time at our disposal, but it may be said that, as in the case of pontine tumours, which were contrasted with those which occur in the cerebellum, the out-standing feature which should guide us is evidence of affection of the pyramidal system in disseminated sclerosis, as revealed by spastic paralysis, ankle clonus, absence of abdominal reflexes, and alteration of the plantar reflex to the extensor type. It is to be admitted, however, that in its early manifestations disseminated sclerosis may affect the cerebellar system to the exclusion of the pyramidal tracts for a time, so that it is fortunate that there are other manifestations that may serve to guide us to a correct diagnosis, of which none is more important than affection of the sphincters, notably that of the bladder, which is liable to occur so early in the course of the disease, and which has no part in the uncomplicated cerebellar syndrome. Subjective and objective defects of cutaneous sensibility must be similarly regarded, while the remissions followed by relapses, so common in the course of disseminated sclerosis, do not occur in cerebellar affections, although we have seen that there are some of the morbid states that affect the organ that permit of marked improvement, even up to complete cure in some cases. Although optic atrophy has formed part of the clinical picture of some cases of cerebellar disease, this is not the rule, except when gross lesions, such as tumours, have occasioned optic neuritis which has resulted in consecutive atrophy, so that the amblyopic defects of vision, with contraction of the fields and central scotoma, with or without optic atrophy, as determined by the ophthalmoscope, must be regarded as in favour of disseminated sclerosis.

When the possibility of cerebellar tumour is under discussion, optic neuritis must be allowed to favour the probability that this, rather than disseminated sclerosis, accounts for the clinical manifestations in general, for although optic neuritis has been determined in disseminated sclerosis by competent observers, it is so uncommon that in a large experience of this disease I have not yet met with a case. Headache of the severe and paroxysmal type, met with in cerebral tumours, is not likely to occur in disseminated sclerosis,

and the same may be said of vomiting, but it is otherwise when we come to consider vertigo, for this symptom may be most pronounced and distressing.

In conclusion I must ask you to allow me to offer an apology to Dr. Charlton Bastian for not including the results of his observations among those which I quoted in support of Dr. Hughlings Jackson's view in regard to the cerebellum, for Dr. Bastian supplied the first proof that muscular tonus is derived from the cerebellum. (Bastian: *Med. Chir. Trans.*, 1890, pp. 207-217; *Paralysis, Cerebral, Bulbar and Spinal*, 1886, pp. 222-228.)

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

SERUM DIAGNOSIS OF SYPHILIS: FLEMING'S METHOD.

IN a paper published in the BRITISH MEDICAL JOURNAL of August 14th, 1909, on the diagnosis of syphilis by some laboratory methods, particularly relating to the complemental fixation method by Wassermann, I brought forward the results of some preliminary trials of the easier methods of Hecht's modification, elaborated by Dr. Fleming—namely, the principle of using both haemolysin and complement for sheep's red blood cells normally present in human blood.

In this first series the results were not very satisfactory, a rather large proportion of bloods normally failed to haemolyse the sheep cells completely, thus reducing the number of positive results that should have been obtained, but at the time I distinctly stated that the numbers were too small to dogmatize upon.

The method, however, appeared to be very valuable, and called for further work; I have therefore made weekly examinations from over 500 cases, controlled by the more elaborate original method, obtaining far more favourable results. This series gave indefinite reactions in only 10 per cent. A positive result was always reliable—in fact, it was obtained in some cases earlier in the disease than with the other methods tried, as shown by several observations taken at different dates from the same case. Consequently I look upon the results given by Dr. Fleming's method as a most valuable check, and if the reaction is definite consider that it should be accepted as final.

The test was almost always applied about six hours after the blood was taken from the patient, so that no deterioration of the complement would have occurred, for it was found that the greater the delay between the time of taking the blood and the test the larger the percentage of indefinite reactions.

I feel that it is due to Dr. Fleming to make this further statement, as some adverse criticisms of his method have been based on my original reference.

P. W. BASSETT-SMITH,
Fleet Surgeon.

The Laboratory, Royal Naval Hospital, Haslar.

A CASE OF FETAL PURPURA.

IN August last I was summoned by a midwife to see a newly-born child of unusual appearance. The mother had always enjoyed good health, and beyond weakness and sleeplessness, and the fact that she was a "shocking, terrible size," she had not suffered from any disease during this pregnancy. She had experienced, however, more discomfort since the date of quickening than with her previous six children. Early in its course, one of her children died from tuberculous broncho-pneumonia. She had a fall six weeks before labour set in, and did not notice fetal movements during the last fortnight. The labour was associated with excess of liquor amnii (about 2 gals.), and there was somewhat excessive haemorrhage during the separation of the placenta. The child was born naturally, and lived for twelve hours. Apart from the appearances to be described, it was a well-formed male child weighing 8 lb. and measuring 23 in. in length. The cord measured 30 in., and showed numerous ecchymoses along its course. The placenta was unusually large. The child's appearance was remarkable. Its skin was dusky, mottled, and covered by ecchymotic areas varying in size from petechial spots to large rounded areas. To the touch they imparted a lumpy feeling, and had a pale raised centre and dark periphery. The colour did not alter on pressure. There were also ecchymoses on the buccal mucosa. On *post-mortem* examination it was found that most of the morbid appearances were confined to the skin. The purpuric areas cut like hard nodes, and showed pale injected surfaces. There were no haemorrhages into the brain substance. Some excess of fluid was present in the right pleural cavity, and petechiae were visible under the pericardium and peritoneum; there were small haemorrhages under the capsule of the right kidney extending into its cortex. The left kidney, spleen, and suprarenal capsules appeared normal. The bladder contained clear urine. Nothing could be found to explain the cause of the condition described except perhaps a history of tubercle in the family of the father. He himself, though stated to be a sufferer from epistaxis and winter cough, was a big healthy-looking man, but his great-grandmother, grandmother, three of his sisters, and one brother had died of phthisis. One of his children had phthisis and one had died of tuberculous broncho-pneumonia. On the mother's side there was no history of tubercle.

NORMAN GLEGG, M.D.Edin.

Datchet.

A CASE OF DIABETIC COMA AT THE AGE OF TEN.

ON December 27th, 1909, I was called to see A. T., a boy a few months over 10 years of age. I found him very restless and complaining of severe epigastric pain; he was also inclined to be drowsy at times, and his mother said he was very thirsty. The boy was very emaciated, and further inquiry elicited the fact that he had been thirsty for some months, and had been passing large quantities of urine. An examination of the urine showed a specific gravity of 1030, a large quantity of sugar, and the presence of acetone was revealed by perchloride of iron. Rectal injections of normal salt solution, and large and frequent doses of sodium bicarbonate in milk were ordered, but the drowsiness rapidly became more pronounced; coma developed on December 29th, and death took place on the following day. Curious to relate, although some neighbours afterwards told me that they had noticed the boy's gradual emaciation, the mother did not seem to have observed it, nor did she set much store on his continued thirst.

Diabetes at this early age is comparatively rare. Amongst 1,360 private patients who consulted Dr. Pavy, diabetes began under 10 years in 8, between 10 and 20 in 57, between 20 and 30 in 97, between 30 and 40 in 224, between 40 and 50 in 339, between 50 and 60 in 428. Even between 60 and 70 the number was 182, very large considering the fewer number of persons living over 60 compared with those between 20 and 40. There were 35 patients in whom the disease began at ages over 70, and 1 over 80; the youngest patient Dr. Pavy had under his care was an infant 12 months old.[1] The proportion of males to females affected with diabetes was 2·5 to 1.

LOUIS E. STEVENSON, B.A., M.B., B.C.Cantab.

Temple Sowerby, Westmorland.

[1] BRITISH MEDICAL JOURNAL, December 5th, 1885.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF MEDICINE.

Thursday, March 3rd, 1910.

Dr. MITCHELL BRUCE, President, in the Chair.

Pericarditis.

SIR JOHN BROADBENT reopened the discussion on pericarditis. He observed that effusion was more frequently met with in adults than in children, and that the prognosis was more favourable. Nothing could be more unfavourable than the prognosis in the relapsing pericarditis so frequently seen in rheumatic children, in which effusion was seldom met with, and in which the pericardium became adherent to the dilated heart. The difficulty of diagnosing between pericardial effusion and a greatly dilated heart without effusion was often very considerable. It was now generally recognized that an extreme degree of cardiac dilatation was commonly met with in rheumatic pericarditis, more especially in children, which was frequently associated with general adherence of the pericardium to the heart, whereas effusion to any great extent was comparatively rare, hence mistakes in diagnosis based on rapid increase of area of the cardiac dullness were less liable to be made.

Dr. W. P. HERRINGHAM said that he had seen two cases in which the heart was punctured in the belief that the pericardium was full of fluid, and in neither case did it seem to do any harm.

Dr. PASTEUR expressed the hope that physicians would acquire the habit of making use of the orthodiagraph in the bedside examination of patients. If it could be shown that pericarditis inhibited diaphragmatic movement, this, by inducing massive collapse, would afford an adequate explanation of some of the physical signs occurring at the left base in cases of pericardial effusion.

Dr. PORTER PARKINSON said the difficulty of the diagnosis of pericarditis was well known, especially of those cases that came on insidiously without local pain and without friction sounds being heard. On that account he wished to mention the occasional presence at the commencement of a pericardial effusion of a sign which was usually supposed to be one of late development only—he referred to signs of compression of the lower lobe of the left lung. It was generally acknowledged that the differential diagnosis between pericardial effusion and dilated heart with adherent pericardium was difficult, and sometimes almost impossible. He thought that in cases in which there might be any doubt it was better to call in a surgeon, who could cut down slowly and feel his way, ascertaining the actual condition of things before the pericardium was opened.

Dr. CYRIL OGLE said that whilst observing a patient some years ago, who was subsequently operated upon and was proved to have the pericardium distended with fibrin and pus, he was struck by the condition of the large veins in the neck. The external jugulars were permanently distended, even when the patient was sitting up, and showed no pulsation at all. He thought that this immobile distension might be of value as distinct from the full veins with pulsation which were usually seen with dilated heart, and might indicate an obstruction by pressure of the fluid to the entry of blood into the heart in a case of pericarditis.

Dr. IRONSIDE BRUCE demonstrated by means of *x*-ray photographs that the outline of the shadow of the pericardium thus affected was sharp.

Mr. LYSTER observed that *x* ray examination could be used for diagnosing even small quantities of fluid in the pericardium.

Dr. POYNTON said that in childhood it was difficult to distinguish between pericardial effusion and dilatation, but he was convinced a large effusion was rare. He had never seen a rheumatic case which needed paracentesis.

Dr. ALEXANDER MORISON said that an analysis of 44 cases of acute pericarditis and adherent pericardium showed that the 12 cases which presented no concurrent endocarditic lesion were cases in which the inflammatory process had spread to the pericardium from the neighbourhood, and were the result of tuberculosis, pneumonia, and empyema. The chief point of clinical interest lay in the diagnosis of cardiac dilatation from pericardial effusion. Referring to treatment, he deprecated therapeutic activity in non-purulent cases when the collection of fluid was limited, but in the event of pericardial exploration being indicated, he preferred the removal of a rib cartilage and cautious incision to puncture with a sharp needle. He related a case in which such an operation revealed an adherent pericardium and dilated heart, the examination of which by puncture would probably have been disastrous.

Dr. C. R. BOX and Dr. G. G. BUTLER communicated some remarks on pericarditis with effusion, based on cases collected from the records of St. Thomas's Hospital; and Dr. SAMUEL WEST replied.

SECTION OF ANAESTHETICS.

AT a meeting on March 4th Mr. R. GILL, President, in the chair, Dr. DUDLEY BUXTON opened a discussion on the *Choice of an anaesthetic*. He pointed out that this must be made by considering (*a*) the state of the patient, (*b*) the exigencies of the operation, (*c*) the skill and experience of the anaesthetist. The choice also depended on the method adopted. The safety of the patient must be the predominant aim. The old rules which pronounced for certain anaesthetics for certain ages must be discarded, and each individual case decided by the physique and standard of health, not by the actual age. Both young children and old persons frequently took ether well, and the belief that infants and women in labour enjoyed immunity from risk in chloroform was exploded. Predisposition to after-effects, respiratory, circulatory, renal, or hepatic, had to be recognized, and an anaesthetic selected which did not initiate the dangers to which the patient was most prone. Trivial operations often were attended with special dangers from the anaesthetic—for example, circumcision, which did not require chloroform, since young children took ether well by the open method. Dr. BUXTON deprecated the use of nitrous oxide or ether in obstructive conditions of the upper air passages, such as in goitres; also in lesions of the brain and spinal cord. Morphine, except in certain cases, was dangerous when given before chloroform. Chloroform with oxygen, and given in exact percentages of strength, was safe; given otherwise it was always liable to cause danger. He recommended nitrous oxide or ethyl chloride followed by ether as a routine anaesthetic, while in prolonged operations he preferred to change from ether to chloroform when complete muscular relaxation had occurred.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, March 2nd, 1910.

Dr. BYROM BRAMWELL, President, in the Chair.

The Place of Athletics in an Educational System.

DR. BURN MURDOCH said that it could not be disputed that active regulated exercise had a beneficial effect both upon general growth and upon local distortions and displacements. The great value of athletics was unanimously appreciated by the heads of the leading schools of the country; and they now occupied an indispensable place in the education both of boys and girls. In this movement, Dr. Almond, of Loretto, had been the pioneer. The term, "athletics," included games such as football, cricket, and systematic developmental exercises; each department was essential and complementary to the other. Athletics, properly regulated and supervised, were of supreme value in school life. They raised the intellectual standard, as Dr. Morgan's statistics in *University Oars* showed; and above all, they developed those elements of character—self-control, endurance, courage, unselfishness—which made for success in life. It was also the unanimous verdict of head masters that athletics did much to keep a high standard of moral purity in schools. Against these benefits were to be placed the risk of accidents and overstrains; but these were reduced to a minimum by careful medical supervision and by grading the boys according to physique. There was also a tendency to undue interest in press reports to the exclusion of other interests.

The PRESIDENT in opening the discussion, invited non-medical guests present to take part.

Dr. Thomson described the system of physical training introduced by Dr. Almond into Loretto, of which he had a long experience as medical officer. Every boy had a month of preliminary exercise, which was valuable as preparatory for the full system of training. Again, after severe exertions at games, or cross-country runs, physical and mental rest was enforced for the remainder of the day. The benefit was specially marked in the case of feeble and delicate boys. In many cases he had seen dull apices clear up in from six months to two years.

Mr. Smith (Morchiston Castle School) insisted on the two-fold nature of the ideal physical training—games and gymnastics. Games without systematized exercises were dangerous. Proper regulation greatly reduced the risks of games. To abolish these risks entirely was impossible; nor was it desirable, for these had their value in the moral training of games.

Mr. Cathcart, speaking of the average physique in public schools, gave statistics to show that for the boy at entrance this was higher than was the case twenty years ago. This was an indication of a general improvement of physique. As an old Loretto boy, he described the aims of Dr. Almond as, first, character; then, physical vigour; lastly, mental instruction.

Mr. Tillard (Cargilfields School) thought there was a danger in training the younger boys too fine. It was not wise to race a two-year-old colt; and so, also, there was risk in training to a high pitch boys at or about the age of puberty. It was at that period that the risk of overstrain was greatest.

Captain Dunlop (Loretto) said that educational gymnastics must go along with games, and maintained the superiority of the modern developmental exercises over the old gymnastic apparatus of parallel and horizontal bars, etc.

Dr. Strong said that Nature and instinct were the only safe guides for exercise in children. Other young animals—for example, the kitten and the lamb—regulated their exercises entirely in that way. The introduction of compulsion in physical training was, in his view, wrong. He agreed that there should be a gymnasium in every school, but it should be a place where the boys would be free to take exercise as they willed.

Dr. Ritchie said that it was at the period of most rapid growth that there was most danger of overstrain. The age incidence of that period varied, but it was then that medical supervision should be most strict.

Dr. McKenzie Johnston insisted on the importance of regular daily exercise both in the young and in adults.

Mr. Stiles said a regular supervision of the physical training of young boys was of extreme importance, and should have preference over mental training. Those movements that developed trunk muscles and chest expansion were especially necessary, and for that reason the exercise of swimming was of great value. It was, however, rather neglected. A large swimming pond should form part of the equipment of every well appointed school. He also directed attention to the importance of an examination of the boots of young children. Wearing down at certain parts gave indication of commencing knock-knee, bow-leg, etc. These could then be easily corrected by thickening the soles at other parts.

Dr. Wood said that, as medical officer of a school for boys between 8 and 14 years, he had found less illness since the school game had been changed from Rugby to Association football. Personally he had been opposed to the change, but meantime it seemed to have had this result.

Drs. Goodall, Chalmers Watson, Flett, Sloan, and J. V. Paterson also spoke.

Dr. Burn Murdoch replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

Friday, February 4th, 1910.

Arthur H. Benson, F.R.C.S.I., President, in the Chair.

Pyonephrotic Kidney.

Mr. L. G. Gunn, in exhibiting a specimen of pyonephrotic kidney, said the patient had only one of the symptoms commonly associated with the condition—namely, some tenderness in the region of the kidney. He had been sent for on December 12th, 1909, to see a lady who had apparently some intestinal obstruction. She had had typhoid fever about eight weeks before. During convalescence she had had two or three attacks of vomiting, and the day before he saw her vomiting had recurred with a rise of temperature, and was stercoraceous. At the time he thought the case one of either septic infection of the gall bladder with adhesions in the hepatic flexure of the colon, or a malignant growth in the large bowel. He treated her with olive oil injections. The tumour subsided, vomiting stopped, and she got very much better. In a few days, however, another, attack came on, and he advised an operation. On cutting down on the large bowel they found it pushed out of place by the kidney lying behind it. He freed the bowel to some extent, satisfied himself that there was no definite lesion in it, closed the wound, then turned the patient over and removed the kidney. The pelvis was full of pus, and a stone was seen in the kidney. The ureter was normal. The fact that the urine was normal increased the difficulty of diagnosis. He found it hard to realize that a stone or kink could make the obstruction. The kidney was quite fixed, and he thought the condition in some of such cases was possibly due to a spasm in the upper part of the ureter. They might, therefore, have to look for a nervous origin in a good many of the cases, and there might be a similar condition present in muscular coats of the bowel causing temporary obstruction.

Rare Sequels of Typhoid Fever.

Dr. Day exhibited a specimen of ulceration of the larynx following enteric fever. The patient was a man about 30, who was taken into hospital in advanced enteric, and with a bad alcoholic history. He lived only a few days, but shortly before he died he coughed up a good deal of very fetid mucus, which evidently came from his larynx. He exhibited the specimen because of its rarity. In another case of advanced enteric with bad alcoholic history, the patient improved for about ten days, and then got a rigor, for which no cause could be found. They found the liver dullness increased, and on examination they got some bloody fluid with the needle. Afterwards they got some pus, and thought he was suffering from empyema. Part of a rib was removed, but only about a teacupful of bloody serum was found, and no pus. He sank and died, and they found an infarction in the lower lobe of the right lung.

Professor White said the infarction was very small. From it he got some typhoid bacilli. He also got several kinds of cocci, including a streptococcus, which in its first cultivation was extremely long. His reading of the case was septicaemia following enteric fever. In the specimen of ulceration of the larynx the ulcer was lower than the usual position. There were no bacilli; the organism in the pus was one of the ordinary staphylococci.

Dr. Parsons recalled a case in which a tracheotomy had to be done on account of the patient's difficulty in breathing. Immediately afterwards surgical emphysema developed, and the swelling spread all over his body right down to the groin. The *post-mortem* examination revealed a very similar condition to that shown in Dr. Day's first specimen. He asked if the infarct was embolic, and whether he had cardiac signs.

Dr. Goulding referred to a discussion on the subject of emphysema, at which Dr. Croly, who had performed the operation referred to by Dr. Parsons, said the emphysema was not the result of the operation, but of the condition of the lung.

Dr. Day, in reply, said he had seen three such cases, and in none of them had he seen emphysema. The patient probably died from intense poisoning. The second case had no heart symptoms other than the usual softening associated with bad enteric.

Pulmonary Diphtheria.

Dr. Day also exhibited a specimen showing tracheal and pulmonary diphtheria from a girl aged 7 years, who had been reported three days ill from "croup." It was evident she was suffering from pulmonary diphtheria, and her condition was so bad that they had to operate. She improved considerably for about thirty hours. Then symptoms of further obstruction lower down in the lungs showed themselves, and she died. She coughed up casts of the bronchial tubes. It was peculiar that in spite of

20,000 units of antitoxin the membrane regrew, and had grown over the trachea and down into the bronchial tubes. After the operation the case went through the moist form of the disease, but next day the dry form came, which nearly always terminated fatally. One lung was almost completely blocked.

Professor WHITE said the larynx was completely blocked by the diphtheritic membrane. The lumen of the trachea was almost completely filled with the exudations. The cut surface of the lung showed most of the bronchi quite filled, though some were partly free. Microscopic sections of the accompanying bronchopneumonia showed a great tendency to necrosis.

Dr. DAY, in reply to Dr. Gunn, said they did not go in for large doses, and they apportioned the dose to the severity of the disease rather than the size of the patient. They gave 4,000 units, and repeated sometimes twice, sometimes three times. In reply to Dr. Harvey, he stated that he could not say if any other organism was present; they nearly always diagnosed diphtheria from the clinical aspects. Swabs in bad cases very often gave negative results. The case was one of the first to show him that diphtheria might start in the lungs and work upwards.

Professor WHITE said that in a recent case, which seemed as if an abscess in the tonsil had burst, the culture gave ordinary streptococci. The low temperature, however, still suggested diphtheria. Next day a swab gave an absolutely pure culture of diphtheria bacilli. As regards Dr. Harvey's question of the association of some other virulent organism, he had not investigated that point as the lung sections were full of diphtheria bacilli.

Sarcoma of Femur.

Dr. HARVEY exhibited a specimen of sarcoma of the femur taken by amputation from a girl aged 15. Three months before admission to hospital she had had a cycle accident. Six weeks later she noticed a swelling on the leg, which gradually increased in size, and at the time of admission was slightly painful, with some increase of local heat. The specimen showed a large swelling at the lower end of the femur which seemed to invade the centre of the bone, but the greater part was subperiosteal. At first sight microscopically he thought it looked like a carcinoma, but from the radiograms, which he showed, it was a typical periosteal sarcoma, and histologically alveolar.

After remarks by Mr. GUNN, Dr. STOKES, Professor WHITE, and Dr. HAYES,

The PRESIDENT said that if any analogy could be drawn from the action of sarcomata within and without the eye, he agreed that is was easy to have the walls practically intact. Such sarcomata grew very slowly for a long time inside the eye, but as soon as they got through the sclerotic they grew with great rapidity. The microscopic sections generally determined easily the internal origin of such growths.

Dr. HARVEY, in reply, said he called it a periosteal sarcoma more or less from the clinical point of view, but a true periosteal sarcoma, involving only the periosteum, seemed to be exceedingly rare. It was very difficult to determine in which direction the tumour had broken through.

Valvular Stenosis of Heart.

Dr. MOORHEAD exhibited a heart showing tricuspid and mitral stenosis. The patient, a girl aged 28, had been admitted to hospital about ten days before suffering from symptoms of severe cardiac failure. On first admission she had a distinct thrill, and a distinct presystolic and systolic murmur, the presystolic being extremely loud over the ensiform cartilage. The presystolic murmur and the thrill both disappeared, and only the systolic murmur persisted. There was a suspicion that she might have, in addition to mitral, a tricuspid stenosis. Later on a double murmur was heard, and he regarded the second as due to aspiration by the right ventricle of blood through a stenosed tricuspid orifice in its diastole. The heart was found to weigh 18 oz. On the right side it showed enormous dilatation and hypertrophy of the right auricle. The terminal muscle stood out in a very striking way. Marked tricuspid stenosis was shown: at the necropsy he could only get one finger through the orifice; the right ventricle was dilated and hypertrophied. On the left side there was a good deal of dilatation and hypertrophy of the left auricle, and in the left ventricle extreme mitral stenosis. The mitral cusps were both calcified and extremely rigid. There was no recognizable aortic murmur, although the aortic valves were also sclerosed. There were some pulmonary infarcts. Both kidneys were extremely irregular on the surface, suggesting congenital lobulation. Looking more closely, he thought it might be the result of multiple infarction.

Remarks were made by Professor O'SULLIVAN and Dr. BOXWELL.

Dr. MOORHEAD, in reply, said he considered the tricuspid stenosis directly secondary to the mitral, and did not think pre-existing congenital deformity was to be looked for in every case.

Encysted Haemo-pericardium.

Dr. BOXWELL exhibited a specimen of encysted haemo-pericardium from a man aged 32, who had been sent to hospital in June with what was supposed to be an enormously enlarged liver. He came to the conclusion that the liver was not so much enlarged as displaced. The patient gave a history of an attack of influenza in March, during which he had suffered from a pain in his chest. The acute attack passed off in about a fortnight, but during convalescence a swelling was noticed in the abdomen, and he then became progressively weaker. When admitted he was deeply cyanosed, and could rest only in the sitting posture or leaning forward. The liver dullness extended a handbreadth below the costal margin, while its upper limit was depressed. He had a left-sided pleural effusion, and a large dull area in the middle of his chest. The heart sounds were rapid and feeble, but there were no murmurs or friction sound. There was no fever. Assuming the displacement of the liver, the diagnosis lay between pericardial effusion and intrathoracic tumour. The pleural fluid was blood-tinged, and this suggested tumour. As the patient was becoming rapidly worse, it was deemed advisable to puncture the pericardium with an exploring needle. This was done in the usual situation, and a syringe full of red blood was drawn off, which clotted naturally in a few minutes. Visions of a displaced and punctured auricle prevented further interference. The patient now developed a loud friction rub on the right side, and in the course of a day or two died. At the *post-mortem* examination a huge encysted haemo-pericardium was found. The inner compartment was quite complete, showing a wall of leathery fibrin, with papillary projections on the inner surface, and containing about a quart of red blood. The part of the cyst wall clinging to the ventricle was partially organized. In the outer compartment was a smaller quantity of blood-stained sero-fibrinous fluid. A large haemorrhage was found in the right lung corresponding to the friction rub. The liver was but little enlarged. The case demonstrated once more the futility of exploring the pericardium with a needle instead of resecting a rib.

Professor O'SULLIVAN and Dr. STOKES commented on the specimen.

Tuberculous Spleen from a Pig.

Professor METTAM exhibited a tuberculous spleen of a pig. The normal weight of the spleen was about 140 grams; the specimen weighed 1,410 grams. The condition was one which was usually received as being of the nature of Hodgkin's disease, probably because there was always difficulty in finding the bacillus, but that morning he had found a couple of tubercle bacilli in the film.

SECTION OF MEDICINE.

Friday, February 18th, 1910.

Dr. LITTLE in the Chair.

Types of Imbecility.

Dr. BOYD BARRETT showed the following cases:

1. The first case was one of *Acquired imbecility.*

The patient was a boy, J. B., aged 5½ years, who was unable to speak articulately. He understood everything said to him, and was somewhat obedient. He did not walk until he was 3 years old. He was subject to fits of temper. His face was marked by congenital syphilis, the bridge of the nose was sunken, and his mouth scarred. His mother had had several miscarriages. He was the only child that lived. Syphilis was the most common cause of secondary or acquired imbecility. It was also the cause in childhood of that fatal mental degeneration, analogous to general paralysis of the insane in adults, called "juvenile general paralysis." The latter was a progressive and fatal disease. The boy, however, enjoyed good health. He was getting stronger every day, and what probably occurred in his case was that, owing to the syphilitic virus, a dystrophy, malformation, or anomaly of structure in the brain took place in fetal life.

2. The second case was of the *Genetous type in imbecility, with single ptosis.*

The patient was a girl aged 10 years. She was quiet and diffident. She had a pale, unhealthy colour, her left eyelid drooped, and she showed that type of face and chest which was associated with adenoids. Her expression was vacant, her speech jerky and indistinct. The family history on the mother's side was extremely good. The father did not drink to excess. Both parents and the other children in the family were healthy. However, all the near relations on the father's side drank excessively. The child's paternal grandmother was said to have "died of drink." The stigmata of degeneration present were: (1) Physical stigmata — vacant expression; Gothic palate; winged ears, with deficient helix. (2) Physiological—nocturnal enuresis to age of 9; faecal incontinence to age of 7; slow in learning to walk and talk. (3) Psychological—body restless; rhythmic movement of hands; cannot be taught to read, write, or sew; loses temper easily; loves dirt and mud. With regard to the prognosis, Dr. Boyd Barrett said that from the grosser defects of childhood she had emerged, but further progress was unlikely. It only remained to answer two questions: Would she live long? Would she be able to earn her livelihood? The answer to both must be in the negative.

3. The third case was of the *Mongol type.*

J. O. H., aged 5 years, was a typical case. With the possible exception of umbilical hernia and congenital heart disease, he had all the chief signs and symptoms of Mongolism. He was restless and chattered unintelligibly but ceaselessly. The complexion was fair. The eyes were oriental, and marked epicanthic folds were evident. He used to dribble and protrude the tongue, but in these respects he had improved somewhat. He had a curious incurvation of the little finger. The head was brachycephalic. Although he was 5 years old he could not walk. He was late in sitting up, late in teething, and late in observing. Mongolism was such a serious condition, with such a bad prognosis for life and utility, that it was of the utmost importance to recognize it.

Dr. KIRKPATRICK, referring to the case of Mongolism, said he had been on the watch for the Mongol spots in children. The stigma was fairly common in Europe, but he had not met with any, or seen any recorded, in Ireland.

Dr. DAWSON said the case bore out the modern idea of Mongolian idiocy. The old idea of syphilis was more or less exploded, and it was now held that it was due to malnutrition of the fetus *in utero*, occurring, as it did, when a child was born at the end of a long family. It had been pointed out that the little finger and thumb in such cases were always abnormally short; those symptoms were present in the case. There was also a slightly spotted condition of the child's iris.

Dr. BARRETT replied.

Pseudo-hypertrophic Muscular Paralysis.

Dr. DEMPSEY showed two cases of boys, brothers, aged 11 and 12. There was nothing peculiar about the family history, except that an uncle had had some nervous disease. When the elder boy was 5 or 6 years of age his mother noticed that he commenced to trip, and had difficulty in going upstairs. In a couple of years he had difficulty in walking, and now, about six years after the onset, he had to be carried. The younger boy was in good health up to a couple of years ago, when he commenced to suffer in the same way. He now showed the combination of atrophy and hypertrophy, which was characteristic of the disease.

The Physico-therapy of Sciatica.

Dr. M. ORB, who read a paper on this subject, divided cases of sciatica, for purposes of treatment, into two classes—acute and chronic—and made no distinction between cases as to their pathology. For the former class he relied chiefly on hot applications and very gentle massage combined, of course, with absolute rest in bed. Blistering and acupuncture he never employed. For chronic cases, massage, hot and cold douches alternately applied (Scottish douche), and active and passive exercising of the affected limb. All treatment was directed to an endeavour to increase the rapidity of the circulation through the affected part.

The CHAIRMAN was sure they would all endorse his experience that, among the immense variety of sciatic cases, he had had some that he wished would go to any one else. He knew a lady who had ruined the reputation of several physicians and surgeons. He had had an unsatisfactory experience of the surgical treatment of nerve stretching, and his opinion was that in what were called acute cases the one remedy was absolute rest.

Dr. CRAIG was accustomed to deal with neuralgic cases as distinct from the neuritic, and there was no doubt that neuralgia of the sciatic nerve had to be treated in much the same way as neuralgia of any other nerve, and generally yielded to antineuralgic treatment. The neuritic cases, however, gave a great deal of trouble. He had been introduced to Corrigan's button many years ago, and had the greatest belief in it, with, of course, some little medical treatment as well. Nerve stretching was, he believed, associated with considerable danger. A patient of his had had his nerve stretched during his absence, and died subsequently of myelitis. He believed that the hypodermic injection of morphine was one of the few things that gave rest when pain was severe.

Dr. ORB replied.

Acute Leukaemia.

Drs. TRAVERS SMITH and EARL read a paper on this subject.

A servant girl, aged 20, was admitted to the Whitworth Hospital under the care of Dr. Travers Smith on November 2nd, 1909. She had only complained of ill health for a fortnight previously. It was found that the glands on the right side of the neck and left axilla were enlarged, and that she was very anaemic. A blood examination showed signs of so-called acute lymphatic leukaemia. She only lived for twenty days after admission. During that time the spleen enlarged rapidly, as did the glands in the neck. The temperature varied between 101° and 103°. Almost the whole of the interior of the mouth became gangrenous. Moderate diarrhoea persisted. Four days before death the temperature fell by crisis. Dr. Earl made the blood examination and performed the autopsy. The blood when first examined contained 60 per cent. of haemoglobin, 3,024,000 red cells per c.mm., and 192,000 white cells per c.mm. Of the white cells about 8 per cent. were small lymphocytes and 88.7 per cent. were transitional cells. In the course of six days the red cells had diminished to 1,776,000 per c.mm. and the haemoglobin to 30 per cent. The white cells remained about the same as at the first examination till death occurred, but the lymphocytes increased to 22 per cent. of total white cells. At the *post-mortem* examination the spleen was very much enlarged, weighing 1,650 grams; the marrow of the shaft of the femur was reddish-grey and gelatinous in appearance; the glands were not enlarged, except those in the anterior mediastinum and left axilla, which were tuberculous. The marrow of the femur contained mainly cells with a strong resemblance to the transitional cells found in the blood, and few cells containing neutrophile granules. The lymphatic glands contained besides lymphocytes a good many transitional cells. The liver was enlarged, but not increased in weight. On section a frothy fluid escaped, and an anaërobic organism with the characters of *Bacillus phlegmones emphysematosae* was isolated from the organ.

HARVEIAN SOCIETY.

Thursday, March 3rd, 1910.

Dr. HANDFIELD-JONES, President, in the Chair.

Pubiotomy in Contracted Pelvis.

DR. G. F. BLACKER opened a discussion on the treatment of labour in contracted pelves, with special reference to the justifiability of pubiotomy. He said that of recent years there had been a remarkable revival of the operations for enlarging the pelvis, and in view of the distinguished obstetricians who practised and taught these operations, it was necessary that the teachers of midwifery in this country should state their position with clearness, and put on record the reasons which led them to prefer other methods of dealing with these cases. For the purpose of considering the subject Dr. Blacker divided contracted pelves into four classes. The first included pelves with a conjugate diameter of $2\frac{3}{5}$ in. or less, all of which should be treated by abdominal section in all circumstances. The second included pelves with a conjugate diameter of $2\frac{3}{5}$ in. to 3 in., in which the ideal treatment was the performance of Caesarean section either before the onset of labour or in its early stages. In conditions not suitable for the performance of Caesarean section the patient should be delivered, if forceps and version failed, by craniotomy or embryotomy. The results of Caesarean section were so good, when practised as an operation of election, that the indications for its performance should be extended to pelves with a conjugate diameter of as much as $3\frac{3}{5}$ in. The fourth class of pelves included those with a conjugate diameter of $3\frac{3}{5}$ in. or more. In this class the best results were obtained by spontaneous labour at full term. The third and most important class included those pelves with

a conjugate diameter of between 3 in. and 3⅛ in. It was in this type of pelvis that the greatest difference of opinion existed, and in which they were asked to substitute pubiotomy for the induction of premature labour, the application of high forceps, the performance of version, or the practice of craniotomy. It was said that the induction of premature labour gave bad results. What were the facts? The maternal mortality was practically *nil*; not only that, but the patients recovered even better than after a full-term delivery. The fetal mortality, the great drawback to the operation, was certainly high, and amounted in 81 cases of induction performed in University College Hospital to 25·8 per cent, 61 children leaving the hospital alive at the end of a fortnight. There was no evidence to show that the mortality of premature children during the first year of life was excessive; indeed the figures, as far as they went, tended to show that it was not greater than that of full-term children. The maternal mortality of pubiotomy was, in the best hands, about 2 per cent., and the fetal mortality was 7 per cent., while the maternal morbidity was at least 40 to 60 per cent. of all cases. The ill effects which might follow this operation were many and serious. As compared with Caesarean section performed before the onset of labour pubiotomy presented no advantages either to the mother or to the child. When compared with the induction of labour, however, the problem was a more difficult one. The immediate danger of pubiotomy was greater than that of the induction of labour, and it was likely to be followed by a number of serious complications which were entirely wanting after the performance of induction. On the other hand, pubiotomy had a fetal mortality of not more than 7 per cent., while the induction of premature labour in contracted pelves was likely to be followed by a fetal mortality of at least 25 per cent. Dr. Blacker thought that, in any case where it was deemed inadvisable to perform Caesarean section or in which this operation was refused by a patient in whom the previous induction of premature labour had resulted in the birth of one or more dead children, she might be allowed to go to full term and that pubiotomy might then, if necessary, be performed. There were a small number of pregnant women in whom the performance of even so comparatively safe an operation as Caesarean section would be attended with considerable risk and in whom the risk of pubiotomy, carried out in proper surroundings, would be less than that of an abdominal section. An additional advantage of this plan of treatment would be that in many cases the necessity for pubiotomy would not arise, since spontaneous delivery might occur, a result which was attended with the minimum of risk to both the mother and the child. If the patient was in labour when seen, and the head failed to engage or was arrested at the brim, then if moderate traction with forceps failed for the forcible delivery of the head through the brim—an operation which entailed a fetal mortality of at least 40 per cent.—or for the performance of version, associated as it was with even a higher fetal mortality, Caesarean section should be preferred. If the case was one unsuitable for Caesarean section, then pubiotomy should certainly be done in preference to craniotomy on the living child. Pubiotomy should, however, be performed only when it was certain that the child's life had not been endangered, and, in view of the serious complications which might follow, it was not an operation suitable for private practice. Dr. CHAMPNEYS emphasized the higher value of the mother's life compared with that of the fetus. He considered Caesarean section a fine operation; its risks were slight to the mother, very slight to the child, and its after-effects *nil*. In all these respects pubiotomy compared unfavourably with it. If for any reason Caesarean section was inadmissible, he would prefer craniotomy to pubiotomy, as it had no risks for the mother, the so-called maternal mortality of craniotomy being due, not to the operation, but to the conditions requiring it. He advised the induction of premature labour in slight degrees of contraction diagnosed during pregnancy. As a teacher he thought that to recommend pubiotomy to the body of the profession would be to court disaster. He would like to know how many pubiotomies had been performed in private on intelligent patients who could appreciate what was going to be done to them. All change was not progress, and England was not a country which depended for initiative on foreign work. He pointed out that abdominal surgery had been rendered possible through Lister and Spencer Wells, and that amongst obstetricians there were no greater names than Smellie, Denman, Rigby, and, later, Matthews Duncan. Dr. HERMAN looked for improvement in the mortality and morbidity of childbirth mainly to the improvement of Caesarean section. The mortality attending this operation in 1904 was 8 per cent., but he saw no reason why it should not be reduced far below this. Caesarean section stood alone among abdominal operations in this respect, that all the structures dealt with were healthy and normal. The operator who had to remove a tumour might find difficulties from its vascular supply, adhesions, etc., but in Caesarean section nothing of this kind existed, and there ought to be no mortality where the routine procuring of asepsis was regarded as a religious ritual. He did not agree with Dr. Blacker in thinking that symphysiotomy was about equal to pubiotomy in difficulty. Subcutaneous symphysiotomy was one of the simplest and easiest operations. Pubiotomy seemed to him a difficult and tedious operation. He had never done it or seen it done, and at present did not intend to do so. The real objection to both operations was the injuries to the soft parts involved in the separation of the bones after division. He thought Dr. Blacker gave away the case for pubiotomy when he said he thought it ought only to be performed in hospitals. What was the use of treatment that could not be employed in ordinary private practice? Lastly, he should have liked to hear more stress laid upon methods of ascertaining the size of the child, as he thought that was as important as pelvimetry. Dr. W. S. A. GRIFFITH pointed out the difficulty of obtaining precise measurements of pelves, and gave an account of some experiments he had made. The conclusion he arrived at was that no exact measurements could be taken unless the whole hand was introduced into the pelvis or the pelvis was contracted to 3 in. or less. He considered that practice based on precise pelvic measurements, even if they could be obtained, was a mistake; many other factors were equally important. He recommended Caesarean section where the head would not enter the brim of the pelvis. Dr. HERBERT SPENCER supported the induction of premature labour, and declared that statistics of fetal mortality were unreliable unless similar conditions obtained or cognizance were taken of individual features, such as the method or time of induction. Whether the child grew up depended largely on the care it received from its mother. He had induced labour six times in one woman, and she had as a result five healthy living children; he mentioned many other cases of multiple premature inductions in his practice. He regarded individual cases like these as of more importance than statistics. He thought Dr. Blacker placed the elective Caesarean section a little too high (3⅝ in.), thereby excluding some cases suitable for induction of premature labour. He had induced labour at the thirty-fifth week in a woman with a conjugate of 3 in., and the child, which weighed at birth 5 lb., was now a healthy girl of 18. He thought there were risks from scars and adhesions following Caesarean section from which the mother was quite free after the induction of premature labour. The percentage of morbidity following pubiotomy was too high for him, and, unlike other operations, it could not safely be repeated on the same patient. He had never seen any convincing evidence that pubiotomy was superior to symphysiotomy, and most of its advocates agreed that it was only suitable for hospital practice and in non-infected cases. The crucial question raised by Dr. Blacker was, what was to be done in the case of patients in labour when the pelvis was too small to allow the head to pass? His answer would depend upon circumstances. He would not exclude craniotomy; he would prefer Caesarean section if the patient had been skilfully attended, and would remove the uterus or do a retroperitoneal Caesarean section rather than do pubiotomy where there was infection or laceration of tissues. Dr. GOW did not think it possible to measure the pelvis accurately even with the hand inside, and regarded such measurements, even if obtained, as of secondary importance. Induction at the thirty-sixth week, or Caesarean section if labour had started, were better than pubiotomy for the size of pelvis indicated. He could only conceive of one condition in which pubiotomy might be indicated, namely, in a case

that had been many hours or days in labour, with the head jammed in the pelvis, rendering delivery by Caesarean section a matter of great difficulty. He would never do pubiotomy as an operation of choice, and would even prefer to do craniotomy. Dr. AMAND ROUTH thought there was no doubt that, if the woman was seen before full time with a conjugate of over 3 in., induction was the correct treatment. If a mistake of too late a date should be made, and dystocia were still present, the obstetrician could fall back upon Caesarean section, pelviotomy, or embryotomy. If the conjugate was under 3 in. he would prefer to do Caesarean section at full term. Cases seen for the first time at full term should be divided definitely into two classes—those where previous attempts had, and had not, been made to deliver *per vias naturales*. In cases where no attempt to deliver had been made with a conjugate up 3¼ in. and a living child, Caesarean section should be done; but if the child were dead, craniotomy, provided the conjugate was over 2½ in. The difficult cases to decide in this class were those where the child was alive and the conjugate between 3¼ in. and 3½ in.; these were, in his opinion, the only cases where pelviotomy was justifiable, and he preferred the subcutaneous symphysiotomy to pubiotomy, as the former operation could be more safely repeated, if necessary, at a future labour; personally, even in these cases, he would prefer to do Caesarean section. In the second class, where attempts had been previously made to deliver, with resulting bruising and infection, neither conservative Caesarean section nor pelviotomy was justifiable, and he considered embryotomy indicated if the conjugate were over 2½ in., and Caesarean section followed by hysterectomy if under 2½ in. He instanced his last case of Caesarean section in this class, where subsequently sloughs formed both on the child's head and over the mother's abdominal wound. This case had decided him to avoid Caesarean section in future in all possibly septic cases. The PRESIDENT congratulated Dr. Blacker on his paper, and considered, having regard to the results of Continental operators, that English obstetricians had exercised a wise discretion in their attitude to the operation of pubiotomy. Dr. BLACKER replied.

UNITED SERVICES MEDICAL SOCIETY.

AT a meeting of this society on January 12th, Surgeon-General BRANFOOT in the chair, a paper was read by Lieutenant-Colonel J. B. WILSON, R.A.M.C., on *The management of venereal disease at Woolwich*. After admitting the unreliability of statistics, he pointed out that in the past four years there had been a very marked decrease in the number of admissions for venereal diseases at Woolwich, amounting to 50 per cent. of the total in 1905, with an even greater reduction of 87 per cent. if the maximum year of 1902 were taken as the starting-point. He submitted that a considerable proportion of this reduction must be attributed to administrative methods. He detailed these shortly, the main point being the centralization of all venereal disease under one specially trained medical officer, with attempts to limit, as far as possible, the amount of paper work. The actual treatment adopted was that practised at Aix-la-Chapelle—namely, systematic inunction daily for forty days, Sundays excluded, the same underclothing being worn all the time, and careful attention being paid to the teeth and throat. The above formed the staple treatment of all syphilitic patients actually in hospital, but other methods were not, of course, neglected. Arsacetin and soamin had been tried, and, in the case of out-patients, injection. For gonorrhoea irrigation was employed, but did not, in Lieutenant-Colonel Wilson's opinion, do much to shorten the disease; he did not consider that on pathological grounds there was much to be said in support of this form of treatment. Both gonococcus vaccine and staphylococcus vaccine had been used. The former had not given satisfactory results, and it was too soon to speak regarding the latter. The author pointed out that it was a mistake to consider that gonorrhoea was a comparatively trivial disease compared with syphilis, and thought that a great amount of the improvement that had occurred at Woolwich was attributable to the fact that the serious nature of the former disease had been recognized, and its after-treatment systematized, as was universally the case with syphilis. He thought more might be done in the direction of teaching the soldier the truth about the dangers of incontinence, and its possible results. Major C. E. POLLOCK criticized the use of inunction from the service point of view, on the ground of the length of time it was necessary to detain the man in hospital in comparison with that necessary for in treatment by injection. As regards gonorrhoea, he suggested that men should be compelled to report when they had incurred risk of infection, so that by clinical examination of the meatal mucus an early diagnosis might be facilitated. Major W. A. WARD agreed that the serum treatment of gonorrhoea had not been a success. He was strongly opposed to the practice of inunction in the army. He thought that in the case of men passed to the Reserve while undergoing a course of treatment for syphilis some steps should be taken to keep in touch with the case. Captain L. W. HARRISON referred to the value of the Wassermann treatment as an index of the necessity for further treatment. He thought more attention might be paid to the combination of mercury with arsenic in the form of arylarsonates. He considered that serum treatment was advantageous in the case of gonorrhoeal rheumatism. Captain BRANSBURY and Fleet Surgeon CLAYTON also took part in the discussion.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

AT a meeting held on February 18th, Professor MUIR, President, in the chair, Mr. A. ERNEST MAYLARD described two cases of *Sarcoma of the stomach*. The following are notes of the cases:

(1) A man aged 63, operated on successfully in Victoria Infirmary in 1903 for stricture of the rectum; readmitted in 1909 for treatment of prolapse of rectum, much enfeebled, and died after operation. *Post-mortem* examination by Dr. John Anderson showed a large cystic tumour springing from the greater curvature of the stomach, with smooth external wall, unilocular, and filled with blood-stained fluid and soft tumour tissue, which microscopic examination proved to be a spindle-celled sarcoma. The gastric mucosa was healthy. (2) A woman aged 57. No symptoms whatever beyond uncomfortable increase of size of abdomen; tumour regarded as an ovarian cystoma; laparotomy; removal of tumour and pedicle, with excision of portion of stomach wall to which it was attached; recovery. Dr. Anderson reported on the tumour as a large unilocular cystic tumour with smooth external wall and filled with laminated clot. Microscopic examination of the cyst wall suggested a tumour of mesoblastic origin—a mesothelioma.

Dr. J. M. MUNRO KERR read notes of 5 cases of *Disease of the caecum and sigmoid simulating affections of the uterus and adnexa*, with which, as supposed gynaecological cases, he had been asked to deal. In three of these a correct diagnosis of the bowel condition was made by Dr. Kerr before operation; in the fourth case the bowel condition was suspected; in the last case it was not recognized till after the abdomen was opened.

(1) Carcinoma of the sigmoid which simulated an ovarian tumour; removal of sigmoid and rectum by combined abdominal and perineal operation; recovery. (2) Advanced malignant disease of rectum which resembled a fibromyoma of uterus; colotomy; recovery. (3) Chronic inflammation of appendix and caecum simulating fibromyoma of uterus; removal of caecum; recovery. (4) Tuberculous disease of caecum which simulated an ovarian tumour; lateral anastomosis; removal of caecum ten days later; recovery. (5) Cyst of left ovary with carcinoma of sigmoid, which at first presented features of extrauterine pregnancy; removal of ovarian cyst; subsequent resection of bowel; recovery.

Dr. J. S. MCKENDRICK gave a lantern demonstration illustrating the *Use of the polygraph in cardiac disease*. Slides were shown illustrating various forms of venous tracings in health and disease, the auricular as contrasted with the ventricular form of venous pulse, and the effects of digitalis on the failing heart. Tracings taken by Lewis by his electric cardiograph were also shown, and reference was made to experiments by Cushny and Lewis on the dog's heart showing that excitation at definite points of the cardiac musculature caused abnormal contractions similar to those met with in many cardiac arrhythmias.

NORTH OF ENGLAND OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

AT a meeting held at Liverpool on February 18th, Dr. W. K. WALLS (Manchester), President, in the chair, Dr. J. E. GARNER (Preston) read notes of a case in which he had removed two large *Solid ovarian tumours* from

a woman of 28. She was suffering from abdominal pain and vomiting, and there was some loss of flesh. The abdomen contained much ascitic fluid but there were no adhesions. The pathologist thought the growths were endotheliomata rather than carcinomata, and probably of secondary origin. A month later a large quantity of ascitic fluid was removed, and a solid mass could then be felt above the umbilicus. This had not been noticed at the operation. Death occurred two months after the operation. Dr. J. H. WILLETT (Liverpool) showed a uterus containing a *Necrotic submucous fibroid* in process of spontaneous expulsion removed from a multipara of 31, who for twelve months had had profuse menorrhagia, accompanied by labour-like hypogastric pain. At one time the passage of some solid pieces of tissue had suggested to her doctor the possibility that the uterus might contain a mole. But, on microscopical examination, the pieces proved to consist of necrotic muscular tissue. There was thick muco-purulent discharge; total abdominal hysterectomy was therefore performed. Dr. R. M. LITTLER (Southport) reported a case of traumatic *Rupture of a uterine fibroid*, with intraperitoneal haemorrhage. The patient, a spinster of 43, had noticed a gradual increase in the size of her abdomen for four or five years. Menstruation had always been regular though scanty, and, until the last three years, attended with severe pain. She had not consulted a doctor. One evening she tripped and fell heavily on the asphalt walk. She was seized at once with severe abdominal pain, but was able to walk home, a distance of a hundred yards. She felt very faint, vomited, and had an urgent desire to go to stool. Severe pain continued all night. Early next morning a doctor was summoned; he gave her morphine hypodermically, and sent her to the Southport Infirmary, where Dr. Littler, acting on a provisional diagnosis of ruptured ovarian cyst, at once opened the abdomen. It contained a large quantity of free blood—a pint at least. A large pedunculated subserous fibroid, presenting a lacerated wound 3 in. long on its anterior surface, was quickly removed. Recovery was uninterrupted. The tumour weighed 6½ lb. The laceration was superficial, but involved a large vein. Dr. J. E. GEMMELL (Liverpool) reported (1) a case of *Pregnancy complicated by acute intestinal obstruction.* The patient, when five months advanced in her first pregnancy, was seized with abdominal pain and repeated vomiting, which in forty-eight hours was faecal in character. The obstruction was found to be caused by a band as large as a Fallopian tube, which ran between the back of the uterus and the right broad ligament, and constricted the ileum some 6 in. from its lower end. This and some smaller adhesions were divided. The vermiform appendix was represented by a blunt stump, ½ in. in length, and free from adhesions. During childhood and adolescence the patient had had several attacks of obscure abdominal illness. Labour, which had commenced before the operation, terminated the same evening. Convalescence was uncomplicated. (2) A case of *Pregnancy at seven months complicated by appendicitis.* Spontaneous premature labour occurred, and the bowels, which had not been opened for seven days, acted normally next day. For three days the patient was much better, then pain recommenced, the temperature rose, and a week later a large swelling, extending from the right Poupart's ligament to the costal margin, was found. On exploration this was found to consist of a suppurating ovarian dermoid cyst below, and a large appendicular abscess above. A drainage tube was placed at each end of the wound. The patient made a good recovery. The following specimens were also shown:—Dr. A. CUFF (Sheffield): Ovarian cystic teratoma removed from a girl of 10. Dr. A. J. WALLACE (Liverpool): Three solid ovarian tumours. Dr. H. BRIGGS (Liverpool): A uterus, containing a large mushroom-shaped adenoma, removed from a patient of 73 years.

WE learn that a leper station and asylum are being established at Makogai in the Fiji Islands for the segregation of all lepers found in the islands.

A DEPARTMENT of experimental breeding has been established in the College of Agriculture of the University of Wisconsin. Dr. Leon J. Cole, who has been appointed professor, will conduct investigations on experimental breeding with special reference to the laws of heredity and the improvement of animal life.

Reviews.

ENGLISH POOR LAW POLICY.

MR. AND MRS. WEBB'S latest volume, *English Poor Law Policy*,[1] is practically in its earlier portion a history of English Poor Law from 1834 to 1907, showing the lines of evolution of Poor Law policy from the "principles of 1834" to the "principles of 1907," and dealing separately with all classes coming under the Poor Law authorities. This policy, we are told, is embodied in "a bewildering chaos of statutes and orders, circulars and minutes, general reports and official letters," numbering literally tens of thousands, which the authors have classified in order to deduce the principles underlying them for each period. We are told in the preface that the task was undertaken at the suggestion of the late Royal Commission, and formed the subject of a report circulated to the Commission in July, 1907, and it is interesting to note that many pages of the latter portion of the book appear verbatim in the Minority Report for Scotland.

Dealing with the historical portion first, analysis of the earlier documents shows three main principles underlying the report of 1834:

1. *The principle of "national uniformity"*—that is, of identity of treatment of each class of the destitute all over the kingdom. This no longer exists to-day, except for vagrants.

2. *The principle of "less eligibility"*—that is, that the condition of the pauper should be "less eligible" than that of the lowest grade of independent labourer.

3. "*The workhouse system*"—that is, that relief should only be given in the workhouse.

The two latter principles are generally regarded as the root-principles of the reforms of 1834, though in the first instance they were only intended to apply to the able-bodied. During the last seventy years, however, three other principles, which were not known, or rather not considered relevant to the relief of the destitute in 1834, have, the authors consider, come to the front. These three "principles of 1907" are stated as follows:

1. *The principle of "curative treatment,"* which is said to be the direct opposite of the principle of less eligibility, and might even be called the principle of "greater eligibility." This is well seen in the institutional treatment of the sick, and to a much less degree in outdoor medical relief. It also appears in the physical training, mental education, and prolonged supervision of pauper children, the grant of more adequate outdoor relief of the deserving aged, and farm colonies for the able-bodied.

2. *The principle of "universal provision"*—that is, the provision by the State of particular services for all who will accept them, quite irrespective of destitution. This is seen most in the educational and sanitary work of municipal authorities, the provision of municipal hospitals open to all, and old-age pensions for all above a certain age having less than a certain income, all which provisions directly impinge on Poor Law policy.

3. *The principle of "compulsion"*—that is, the treatment of individuals in the way the community deems best, whether the individual likes it or not.

In contrasting the principles of 1834 with those of 1907, the authors say that the former embody the doctrine of *laisser faire*, while those of 1907 embody the doctrine of the mutual obligation between the individual and the community. It is admitted that the principles of 1907 have not been consciously selected in many cases, and that they are not all of universal application; for instance, the aged are not susceptible of "curative treatment," only a few sections such as lunatics, patients suffering from infectious disease, and the incorrigible loafers need "compulsion," whilst in our present civilization "universal provision" will be limited to particular services such as education and sanitation in their widest interpretation. Upon this the following observations are made:

It is here that the Poor Law Commission of 1905-9 will have its greatest effect. Its criticisms and recommendations will be operative, whatever may be the legislative outcome, in deciding to what extent and in what particular directions there will be an increasing application of the principle of curative treatment,

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[1] *English Poor Law Policy.* By Sidney and Beatrice Webb. London: Longmans, Green and Co. 1910. (Med. 8vo, pp. 395, with Appendices. 7s. 6d.)

the principle of compulsion, and the principle of universal provision respectively: or, on the other hand, to what extent and in what direction we shall seek to revive one or other of the principles of 1834.

We are told later that "the economical and efficient administration of these three principles of 1907 involves the acceptance of another principle—namely, the 'principle of prevention'—the principle of 'actively preventing the several causes of destitution, and of arresting their operation in the incipient stage, whether by operating on the individual or the environment.'"

Having deduced the principles of 1834 and 1907 from a critical analysis of all the documents available—a task carried out with the greatest care and ability, and in a way deserving of the highest commendation—the authors devote the later portion of the book to a comparison between the Majority and the Minority Reports of the late Royal Commission, especially as regards their attitude towards the principles of 1834 and 1907. As might be expected, the comparison is altogether in favour of the Minority Report. It is sought to show that the Majority Report professes to accept the principles of 1907, but tries to graft them on a new destitution authority, and "then inevitably finds itself compelled, seeing that these principles are incompatible with the very nature of a destitution authority, to revert in reality to the principles of 1834." We are told that the Minority Report, on the contrary, carries the principles of 1907 to their logical conclusion, "seeing absolutely no need for a Poor Law authority, or for any policy of relieving destitution on any principles whatever," but merging the functions of the Poor Law authority in the ordinary functions of municipal and county administration.

Supporters of the Majority scheme will certainly complain that the principles of their scheme are not properly presented. It is made to appear, for instance, that the Majority would assign all the righteous destitute to the Voluntary Aid Committee, and all the morally depraved and unrighteous destitute to the Public Assistance Authority. The authors go even further, and, seizing on the word "moral," which Professor Bosanquet used in a carefully defined sense, they make such play with the word as to give the impression that the Majority assumes every pauper to be a pauper by his own fault and undeserving. If this is not their intention, it is difficult to understand why the authors exclaim "we have to realize" that pauper infants and children "are human beings rendered destitute not by any action or inaction of their own." The very reminder is an insinuation that the Majority overlooks such an obvious fact, and it is a travesty of the Majority Report to say that the Public Assistance Authority is intended to deal "only with the worthless and undeserving whom the charitable have, because of their character, refused to aid." The truth is that the treatment of the Majority for infants and children, the sick and the aged and infirm, is calculated to remove as far as possible any stigma of pauperism on the ground that these classes are deserving of the highest sympathy and it is somewhat curious to note that the Minority in another place finds fault with the Majority for making its medical service so attractive that "it would lead to a large measure of free medical relief without adequate safeguard either for the medical profession generally or for the ratepayer." It is not easy to see how the service could be both too attractive and at the same time "less eligible." As for the "stigma of pauperism" which it is asserted would attach to medical relief from the Public Assistance Authority in virtue of its being a "destitution authority," would it not also attach to the Sanitary and Education Committees under the Minority scheme? To make the Sanitary Committee the recognized authority for distributing free medical aid to the destitute, or the Education Committee the recognized authority for distributing general relief to destitute children, would practically make these committees into destitution authorities. The fact that they have also other duties makes no difference, for boards of guardians have also other duties. These committees would treat the destitute and therefore would be destitution authorities, and no playing with names—as, for instance, calling outdoor relief "home aliment"—will make it anything but pauper relief. In addition, the strict "inquiry and recovery" by the registrar will make the Minority medical service as "deterrent" and "ineligible" as the similar inquiry and recovery by the Public Assistance Authority. People are not so shortsighted as to care much who it is that inquires and recovers; it is the fact that counts. To call the Public Assistance Authority a destitution authority may be allowed, but to attempt beforehand to tack on to it all the odium of present Poor Law relief simply recoils on the authors' own scheme when it is found that the attacker is in the same boat with the attacked.

Again, it seems to be assumed that the Minority scheme has some monopoly of the "principle of prevention," but, to take a single instance—the treatment of the sick—it is extremely doubtful whether one committee—the Sanitary Committee—could deal with both prevention and cure as efficiently as the two authorities of the Majority scheme—the Sanitary Committee, as now, for general measures of prevention, and the Medical Assistance Committee for treatment and such personal methods of prevention as will necessarily go with personal treatment. It is probable that as good results would be obtained by the present Sanitary Committee, properly co-ordinated, as it must be, with the Medical Assistance Committee, as would be obtained by the Sanitary Committee of the Minority scheme, burdened, in addition to its special duty of prevention, with curative treatment, and with provision of medical extras, food, clothing, and everything that a destitute sick person may require, and which, in virtue of its becoming a destitution authority, the Sanitary Committee would have to supply. The attempt to conceal the one function—relief of destitution—by naming the committee after its other functions, though it may be useful in the same way as it is sometimes useful to call an opium pill a "compound soap pill," is really too transparent a device, and is no better because the Majority uses the same device.

The fact is that in many of the points dealt with in this book there is little to choose between the two reports in their capacity for attaining what is desirable of the principles of 1834 and 1907. The principle of "less eligibility" cannot be wholly abandoned for all classes, though it may not depend on a "workhouse test," and the proper combination of this principle with the principles of 1907 and the principle of prevention will involve no rigid adherence to either the Majority or the Minority schemes alone. So far as the historical portion of the book is concerned, it reflects the highest credit on its authors for their painstaking and evidently accurate presentation of the lines of evolution of Poor Law policy during the last seventy-five years, lines by no means straight, but often bent back on themselves, though in the main leading from a lower to a higher stage of evolution. So far, however, as the object of the book is to prove the superiority of the Minority scheme, the argument depends too much on verbal brilliancies, while its excessive disparagement of the Majority scheme and lavish extolling of the Minority scheme would better suit a party political pamphlet than a sober historical work.

EXERCISES IN HEART AFFECTIONS.

Remedial Gymnastics for Heart Affections Used at Bad-Nauheim is a translation of a book by Drs. JULIUS HOFMANN and LUDWIG PÖHLMAN, of Berlin and Nauheim, undertaken by Dr. J. G. GARSON of Eversley Sanatorium, where the Nauheim methods are practised.[2] The translator's experience abroad and at home has enabled him to supplement the original descriptions of the gymnastics as taught at Nauheim by some comments and explanations of his own which are very much to the point. In his preface Dr. Garson points out that although the Nauheim baths can be imitated by chemical means, such imitations fall very short of the natural springs, where the water is charged with gas under pressure, and, its evolution being continuous, the effect upon the human organism is very much more marked. Hence the need for special knowledge and caution in the use of such baths for cases of enfeebled cardiac power, and as a matter of fact the full carbonic acid stream bath is seldom prescribed at Nauheim. The gymnastics, on the other hand, can be

[2] *Remedial Gymnastics for Heart Affections Used at Bad-Nauheim.* Translation of a work by Dr. Med. Julius Hofmann and Dr. Med. Ludwig Pöhlman of Berlin and Bad-Nauheim, by J. G. Garson, M.D., Physician to the Sanatoriums and Bad-Nauheim, Eversley, Hants. London: Swan Sonnenschein and Co. 1909. (Sup. roy. 8vo, pp. 144, illustrations 51. 5s.)

practised anywhere, but the results obtained from them depend largely upon the intelligence with which they are employed.

In the first few chapters of the book clear indications are given as to the class of case to which gymnastic treatment is not applicable, and as to the means by which such unsuitability may be recognized after treatment has been already begun. The pulse, blood pressure, and physical signs must all be investigated, while a test known as Sommer's analysis of movements may be utilized as a means of gauging the tremulousness of limb muscles after exertion. Excessive tremor is to be regarded as an indication against further exertion. The gymnastic exercises as recommended by the authors and the translator are fully described and well illustrated by full-page photographs showing the relative parts to be played by patient and operator respectively. The handbook, which is admirably presented by the publishers, may be taken as a trustworthy guide to a form of treatment which is often misapplied because it is misunderstood. The writers and their translator have put the case in simple but convincing form, all the more convincing from not being overstated.

OBSTETRICS.

A NOTICE of the first edition of Dr. WALLICH'S lucidly written handbook of obstetrics[3] was published in the JOURNAL of August 24th, 1907. The second differs in that the illustrations are now put with the letterpress that relates to them instead of being all together at the end of the book. This we think an improvement. The characteristics of the book remain as before; it is one of the best productions of the French school. Our business is to criticize, so we may observe that the author tells the reader that gonorrhoea is responsible for about half the cases of purulent ophthalmia in the infant. We should have thought much more than half. For its prevention the author recommends the precaution originally advised by Crédé (whose name, by the way, is not mentioned)—namely, the instillation into the eyes of a 2 per cent. solution of silver nitrate immediately after birth. This, we are told, the French midwife is now officially instructed to do. Here in England and in Germany people are coming to think that 1 per cent. is strong enough. The book brings inside its cover a eulogistic slip from the pen of A. Couvelaire, and with his praise of its merits we heartily agree.

We noticed the second edition of Dr. JARDINE'S *Clinical Obstetrics*[4] in our issue of March 23rd, 1907. We told our readers then that the book was essentially a record of the opinions and experience of an individual. That character it still retains. The third edition is increased in size by the incorporation of more cases and coloured plates. The author is especially interested in the subject of puerperal eclampsia, but the book does not show complete knowledge of the literature of the subject. At p. 397 the author lays down the precept, "If the fits cannot be controlled, the uterus should be emptied by *accouchement forcé*" Some may ask, Why not use English? Why not say, "The uterus should be forcibly emptied"? It does not sound so learned or so pretty, but it suggests the question, Why use force? This question was debated at a meeting of the Medical Society of London in 1902, at which a paper was read by Dr. Herman, who had collected and compared over 2,000 cases recorded in the best hospitals in Europe, and found that forcible delivery neither controlled the fits nor improved the prognosis. The most rapid method of delivery possible—that by Caesarean section—had been followed by a higher death-rate than that of eclampsia in which delivery has been left to Nature, obviously because the mortality of the operation is added to that of the disease. The author's dogmatism surprises us when we read further on (p. 389), "Personally I have had a good deal of experience of immediate delivery, but I have got quite as good results by leaving the uterus alone." Why, then, stimulate the pupil to use force? We are glad to note that Dr. Jardine condemns Caesarean section for placenta praevia. But why injure the memory of a great surgeon—Lawson Tait—by quoting an unfortunate statement concerning a subject he knew next to nothing about, namely, that "the mortality of placenta praevia was 50 per cent."? (p. 245). Lapses of this kind are best forgotten.

Dr. PAQUY'S *Manuel de pratique obstétricale*[5] exhibits the best qualities of French literature. It is graceful, orderly, precise, and sensible. We have not met with any manual for midwives exhibiting these high qualities in the same degree. It is exceptional for a man of large knowledge and long experience to occupy himself in writing an elementary work; but when he does the result is a work much superior to the digests of larger books, which young men without enough experience to make them trust their own judgement, who set to work to write a small textbook, are apt to produce. We recommend this book strongly to nurses and midwives who can read French. We have, however, one thing to grumble at—the book has no index; only a table of contents.

NURSING LITERATURE.

A LITTLE knowledge is a dangerous thing. A little medical knowledge in a nurse may be highly dangerous, and we would recommend to the writers of textbooks for nurses the exercise of a wise caution in the selection and presentation of the subjects which should be taught during the course of training. Miss AIKENS of Detroit, who has put together a volume of *Clinical Studies for Nurses*,[6] appears to hold that the nurse should receive instruction on all branches of medical science, and even goes so far as to place on the nurse's library table books like Professor Osler's well-known textbook. Surely it is sufficient for the nurse to receive some clinical instruction from the physician or surgeon in the course of her practical work and to leave textbooks to the student of medicine proper. But if the nurse must have a textbook on medicine, the book should be arranged systematically, it should be correct, and it should avoid all controversial points. Miss Aikens's book fails in each of these directions. With regard to want of system, a clear example may be taken from the description of methods of examination. Just when the reader would suppose that inspection, mensuration, palpation, and auscultation are to be described, he or she finds that the author has gone off at a tangent into the matter of family history. An example of inexactness in a matter of importance may be taken at random in the definition of diagnosis as "naming the disease." Other examples occur throughout the book. The illustrations, which are borrowed from other sources, are for the most part good.

A book intended to teach the young nurse to read a prescription may be a dangerous weapon, and "J. G. H.," in the *Nurse's Guide to Prescription Reading*,[7] states that the nurse is only to read and not to criticize the prescription. Yet the book contains material which, though clear and elementary, might encourage the undesired criticism. For the rest, it contains some useful lessons for the "young nurse," and some useless ones. We fail to realize why in the list of drugs mineral waters are included, and the statement that P.P. means physiologically pure is odd; it might also be translated into progressive paralysis or prunes and prisms. We suggest that before a matron gives her nurses this booklet she should read it and judge for herself whether she agrees with the methods of teaching and the details.

Miss ISABEL MCISAAC, the authoress of *Bacteriology for Nurses*,[8] is an enterprising lady, and one who is not afraid

[3] *Eléments d'obstétrique.* Par le Dr. V. Wallich, Professeur agrégé à la Faculté de Médecine de Paris. Deuxième édition. Avec 135 figures dans le texte. Paris: G. Steinheil. 1910. (Cr. 8vo, pp. 720, 135 figures. Fr.8.)

[4] *Clinical Obstetrics.* By Robert Jardine, M.D.Edin., Professor of Midwifery in St. Mungo's College, Glasgow. Third edition. London: Henry Kimpton. 1910. (Roy. 8vo, pp. 745; 108 illustrations and 4 coloured plates. 21s.)

[5] *Manuel de pratique obstétricale.* Par Dr. E. Paquy, Ancien Chef de Laboratoire, Ancien Chef de Clinique d'Accouchement à la Faculté de Médecine de l'Université de Paris. Bibliothèque de la Sage-Femme. Paris: F. Alcan. 1910. (Cr. 8vo, pp. 410; 107 gravures. Fr. 4.)

[6] *Clinical Studies for Nurses.* By Charlotte A. Aikens. Philadelphia and London: W. B. Saunders Company. 1909. (Demy 8vo, pp. 510; illustrated. 10s.)

[7] *The Nurse's Guide to Prescription Reading.* By J. G. H. Edinburgh: E. and S. Livingstone. 1910. (Roy. 32mo, pp. 150. 1s. 6d.)

[8] *Bacteriology for Nurses.* By Isabel McIsaac. New York and London: The Macmillan Company. 1909. (Cr. 8vo, pp. 192, illustrated. 5s.)

of getting into deep water. She is impelled to write this book by the desire to inform pupil nurses with regard to the sources of infection and the mechanism of the processes connected with infection. She admits that bacteriological work in the laboratory is no part of a graduate nurse's duty, but believes that a short bacteriological course is necessary to fit her for the various departments of nursing. We are inclined to agree that it is desirable to explain to a nurse the nature of an infection against which she has to protect herself, her patient and others in her vicinity, but this instruction should be elementary and correct. Miss McIsaac attempts to deal with complicated and difficult subjects in a dogmatic manner, and frequently fails to make her meaning clear. She also fails to adhere to facts. In her chapter on venereal diseases, for example, she boldly asserts that paternal infection can take place without maternal infection—a doctrine which is strenuously denied by competent European observers. She adheres to the old belief that the source of infection in scarlatina is in the desquamated epidermis. In her theoretical passages she reproduces in an uncompromising way doctrines which have never been held or no longer obtain. On the other hand, much of the book sets out in a clear manner information which might be of value to a pupil nurse. It is a moot question whether a book on bacteriology should be written by a bacteriologist or by a matron, when intended for nurses, since if written by the expert the descriptions might be too technical. But, on the other hand, if the writer be a matron of nurses, it is conceivable that she may not quite understand the subject on which she is writing, and the result would be, as exemplified in the book before us, an account composed largely of quotations from other writers strung together without sufficient understanding, and connected by statements which neither correspond to common sense nor represent ordinarily accepted doctrines. We therefore prefer bacteriology manufactured by bacteriologists.

NOTES ON BOOKS.

THE fourth volume in the 1909 series of the collection of clinical and other papers, published in Philadelphia under the title of *International Clinics*[9] contains a number of articles which are on the whole well worth reading. The subjects are grouped under treatment, medicine, surgery, Roentgenology (we wonder if the study of sour milk will soon be called "Metchnikoffology"), gynaecology and obstetrics, genito-urinary diseases, paediatrics, parasitology, laryngology and pathology. The majority of the articles are penned by American writers, including Flexner, Wainwright, Carey, and others, while of the extra-American authors, England is represented by Sir Dyce Duckworth, and France by Dr. Fredet, Dr. Guisez, and Dr. Sergent. The volume is carefully edited and the illustrations good. As a form of post-graduate teaching, we can recommend this series.

Vol. III, No. 4,[10] of the *Annals of Tropical Medicine and Parasitology* contains: (1) Reports of the twenty-first expedition of the Liverpool School of Tropical Medicine—Jamaica, 1908–9: Section I. Medical and Economic Entomology. Part I. Ticks and other Blood-sucking Arthropods. (2) Reports of the twenty-first expedition of the Liverpool School of Tropical Medicine—Jamaica, 1908–9: Section II. Malaria. The first section is by ROBERT NEWSTEAD; the second by Dr. PROUT, C.M.G. Ticks appear to be a curse in Jamaica, and Mr. Newstead's report, carefully prepared and clearly written, should prove of great value to the Government of that island. The question of preventive measures is one of great importance, not only for Jamaica, but for many other parts of the world as well. Dr. Prout's exhaustive and intensely interesting report on malaria should also be welcome generally as well as locally. The practical measures recommended by him for mosquito reduction are well thought out and thoroughly up to date. From what he tells us it would appear that a certain degree of laxity and slackness in regard to antimalarial measures had arisen. The report should do an immense amount of good; a visit from the outside like this is always beneficial to a more or less isolated community.

To the fifteenth volume of the *Collected Papers of the Institute of Physiology, University College, London*, the editor, Professor E. H. STARLING, contributes an account of the new institute, which was described in an illustrated article in the JOURNAL of June 12th, 1909, p. 1436 et seq. The remainder of the volume consists of reprints of papers contributed by workers in the institute to various periodicals and societies. They afford str king evidence of the amount and value of the work done there.

MEDICAL AND SURGICAL APPLIANCES.

A New Leg Rest.

WE had an opportunity recently of testing an appliance known as the "Kumfee," made by the Purpose Manufacturing Company, 35, Park Road, Teddington. It consists of two short metal legs supporting a kind of swinging table-top. The latter is of such height that when placed in front of an ordinary armchair it forms a comfortable leg rest, which adjusts itself accurately to any movements of the body. On the table top are two cushions, one of which can be moved forward or backward so as to suit any length of limb. This has a wooden back, and is hinged so that when the table is not in use as a foot rest, and the top assumes a vertical position, it falls outwards and makes a convenient book rest. When in this position the appliance looks like an ordinary fire screen, and may be used for that purpose. It is upholstered in various colours and can be obtained with the cushions and back covered with dust-proof washable material rendering it suitable for use in hospitals. Its construction is simple and ingenious, and it certainly fulfils its function efficiently. It is already in use, we understand, in the Officers' Convalescent Home at Osborne, and at one or two institutions in London. It is the invention of a medical man.

An Ammonium Chloride Inhaler.

Our attention has been called to the fact that the ammonium chloride inhaler described last week (p. 578) was the subject of proceedings at the City of London Petty Sessions at the Mansion House on February 9th, when Jacob Hertz, trading as Hertz and Co., was summoned under the Merchandise Marks Act for having applied a false trade description to what was called a "perfect" inhaler, inasmuch as he represented it to be patented, and also under the Patents and Designs Act, 1907, for having represented that the inhaler was a patented article. Mr. Tebbs, who appeared to prosecute, said that the real prosecutor was Dr. A. F. Hertz, Assistant Physician Guy's Hospital. The inhaler was described as "Dr. Hertz' Perfect Inhaler, Patent No. 347538." Jacob Hertz was in no way related to Dr. Hertz, but some time ago had called on physicians in connexion with a mineral water, and informed them that he was the father of Dr. Hertz of Guy's Hospital. Dr. Hertz's solicitors had written to the defendant complaining of this.[1] Subsequently the name of the inhaler, previously called "the Simplex" inhaler, was changed to "Dr. Hertz' inhaler," and the defendant, in introducing the appliance to Messrs. Allen and Hanburys, had represented that it was the invention of Dr. Hertz of Guy's Hospital, and that he was Dr. Hertz's father. The firm subsequently sent out to members of the medical profession a large number of circulars referring to the inhaler. Proof was given that the inhaler was not the subject of an English patent. Dr. Hertz gave evidence stating that he was in no way related to or connected with the defendant, Jacob Hertz, whom he had never seen before that day, and had no connexion with the inhaler. The defendant in his evidence said that he had acted only as the agent of the Hamburg agency of the New York American Trading Company, and was informed that the appliance was patented in Germany and was protected in England. He alleged that the inhaler was invented by a Dr. Hertz, formerly of Antwerp and now of Oakland, California. The defendant denied that he had mentioned the name of Dr. Hertz of Guy's Hospital to Messrs. Allen and Hanburys. The alderman, however, was of opinion that the defendant had committed a distinct fraud, and that the fraud was aggravated by the fact that he had represented himself as the father of Dr. Hertz. A fine of £20 and 10 guineas costs was inflicted under the Merchandise Marks Act, and a nominal penalty of 5s. and 2s. costs under the Patents and Designs Acts.

[9] *International Clinics.* A quarterly magazine of illustrated clinical lectures and especially prepared original articles. Edited by W. T. Longcope, M.D., with the collaboration of several professors of various countries. Philadelphia and London: J. B. Lippincott. 1909. (Royal 8vo, pp. 320; 3 coloured and 27 black and white plates and 15 figures. Price not given.)

[10] University of Liverpool. *Annals of Tropical Medicine and Parasitology*, November 17th, 1909. Series T.M., vol. iii, No. 4. Issued by the Liverpool School of Tropical Medicine. Liverpool: At the University Press; London: Constable and Company, Ltd. (Price 7s. 6d. net.)

[1] A notice on the subject was published in the JOURNAL of November 20th, 1909, p. 1508.

MEDICAL REPORT OF THE GERMAN CAMPAIGN IN SOUTH-WEST AFRICA, 1904-7.

THE first volume of the medical report of the German campaign in South-West Africa in 1904–7[1] contains the administrative portion of the official report issued by the German Colonial Office. Like most German reports, it is thorough, and enters into minute details of every medical aspect of the campaign. The matter is divided into the following seven sections: (1) The strength of the force and its medical personnel; (2) the medical and surgical equipment; (3) hygiene; (4) the history of the individual medical units; (5) transport of sick and wounded by land; (6) transport of troops and invalids by sea; (7) the work of the voluntary aid societies.

The Strength of the Force.

This was taken from the official report of the campaign published by the German general staff. Before the commencement of the campaign the total force in the colony (including police) only amounted to 827; during the campaign 20,111 officers and men were sent out, making an average annual strength for the whole campaign of 11,240. The monthly and average annual strengths are shown in diagrammatic form. When the insurrection began there were only 10 medical officers and 44 medical subordinates in the colony. These were reinforced at different times by 193 medical officers and 727 medical subordinates of all kinds. Taking the average for the whole campaign, there was 1 medical officer to 120 men, and 1 medical subordinate to every 30 men. Of the medical officers, 5 were killed in action and 4 died of enteric fever; while 7 bearers were killed, 2 returned as missing, and 20 died of enteric fever.

Fig. 1.—Main dressing station (that is, field ambulance) during the fight at Hamakari, August 11th, 1904.

Organization of the Medical Service.

As the home regulations were found to be unworkable in the colony, a fresh set of standing orders had to be drawn up to suit the local circumstances. These are given in full in an appendix (6*a*). Owing to the military situation, units had to be split up into small parties, hence it was found impossible to adhere to a system of sick returns by units, and the following order was issued: At the end of every ten days each detachment had to send in by telegraph or heliograph the following information, merely giving the figures, but always in the same sequence: Total number of sick; number of wounded; number of typhoid patients; number of malaria patients; and the detachment commander's name. This report was confirmed by letter, with full details, at the earliest opportunity. From these reports a general admission and discharge book for the whole force was kept in the administrative office at Windhuk, and this forms the basis of the medical statistics now in course of preparation.

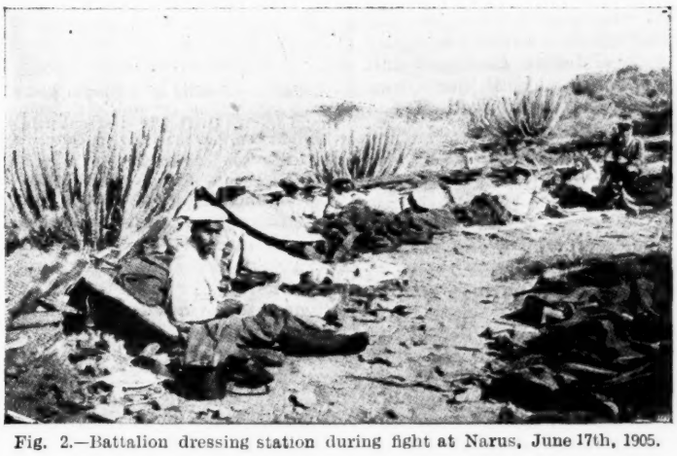

Fig. 2.—Battalion dressing station during fight at Narus, June 17th, 1905.

Medical Officers' Work with Troops in the Field.

One medical officer had to be assigned to each company, as the force usually worked in small detached parties, often at a distance from the line of rail or from any fixed post where medical assistance could be obtained. The fighting was usually at close ranges, and attempts to remove wounded from the firing line had to be abandoned, as this afforded the enemy an excellent target.

Throughout the campaign the military operations were much hampered by an insufficiency of transport and scarcity of water. The medical services suffered greatly owing to the lack of wheeled transport. Most of the equipment, tents, packages of medical and surgical supplies, etc., sent out from Germany were found out to be so heavy and bulky that it was impossible to take them with the mobile column. The field hospitals were accordingly split up into sections, converted into stationary hospitals, and located at the various fixed posts, to which patients were sent in empty wagons returning for supplies. The main dressing station during the fight at Hamakari in August, 1904, is shown in Fig. 1, and the battalion dressing station during the fight at Narus in June, 1905, in Fig. 2, both reproduced from one of the plates with which the report is illustrated. The conveyance of sick and wounded in the earlier part of the campaign was greatly handicapped by the absence of proper medical transport. In April, 1905, a properly equipped sick transport column was sent out from Germany, which greatly facilitated this part of the work; in many parts of the country the absence of roads prevented any wheeled transport from accompanying the troops, and patients had to be carried long distances by hand, till the wagons or some medical post was reached. All woodwork became brittle, owing to the excessively dry, hot climate in the interior, and consequently frequent repairs to wagons and stretchers were necessary.

Hygiene.

This section contains a great deal of information based on the experience of the German colonial forces, and merits careful study on the part of those interested in colonial expeditions. Meteorological tables are given, and show the great degree of atmospheric humidity on the coast, as also the reverse condition, coupled with extreme diurnal variations in temperature, in the interior. When discussing the question of clothing it is stated that the soldiers preferred cotton underclothing, and that little use was made of the coloured glasses issued to protect men's eyes from the glare. The average weight carried by a dismounted soldier was 52 lb., that by a mounted man 31 lb.

The question of rations is very fully discussed. The

[1] *Sanitäts-Bericht über die Kaiserliche Schutztruppe fur Südwestafrica während des Herero und Hottentotten-aufstandes 1 Jan., 1904, bis 31 Marz, 1907.* Bearbeitet im Kommando der Schutztruppen im Reichs-Kolonialamt. Berlin: Mittler und Sohn. 1909. (11½ by 9 in., pp. 264, 23 appendices, 19 tables, 86 diagrams, illustrations, and maps.)

full ration issued at the commencement of the campaign had a food value equal to 4,725 calories; the meat portion (2.2 lb.) was subsequently reduced by half, leaving the value of the ration 3,788 calories. Great difficulty was experienced in obtaining fresh vegetables, and, in fact, it was only at fixed posts that this issue could be made. In April, 1905, owing to the occurrence of scurvy, certain extras, among which were beer and various fruit juices, were added to the diet. The great fault of the ration was the low proportion of fat, due to the poor quality of the beef.

The advisability of issuing alcohol to the troops is carefully considered. During the greater part of the campaign a daily allowance of $\frac{1}{10}$ litre of rum, cognac, or other spirit was issued; at a later period this was replaced by red wine or fruit juice. The arguments advanced in favour of giving alcohol were:

1. Most of the men had been accustomed to take alcohol in some form, and it was thought that if no issue were made they would be inclined to obtain some inferior spirit surreptitiously.
2. Many medical officers held that alcohol taken at night acted beneficially by preventing stomach chills and gastro-intestinal disorders, and that, moreover, it tended to induce sleep, which tea or coffee did not.
3. It helped to make the alkaline water of the country palatable.
4. It has a certain food value, calculated in this case at 300 calories.
5. In the absence of yeast or baking powder it was found useful when baking bread.

On the other hand, the following objections were raised:

1. The quantity allowed daily was too great.
2. If drunk at once, under the trying conditions of the campaign it tended in many cases to make men either sleepy, irritable, insubordinate, or lazy.
3. There was great temptation to dispose of it to a comrade, who might thus easily become inebriated.
4. Men who were formerly abstainers acquired a taste for alcohol.
5. When troops were without alcohol there was no appreciable increase in the amount of sickness.

Water.

Throughout the colony there was a great scarcity of water and in many places it was strongly saline. The two main sources of supply were deep wells and pools. All the old-standing sources of supply were highly contaminated by natives and cattle, and it was no uncommon experience to find the water turbid, discoloured, and evil-smelling, with one or more dead animals floating in it. In regard to means of purification the troops were liberally supplied with Berkefeld filters; these, however, speedily became choked, were often damaged during transport and on the whole gave little satisfaction. Heat sterilizers could rarely be taken with the columns owing to their size and weight, but in permanent camps they proved very useful. Precipitation by alum, preceded by boiling when fuel and time were available, was really found to yield the most satisfactory results.

Work of Medical Units: Transport of Sick and Wounded.

The work of individual medical units is shown in tabular form.

The section on the transport of sick and wounded in the country is really a more detailed description of the difficulties occasioned by the absence or insufficiency of

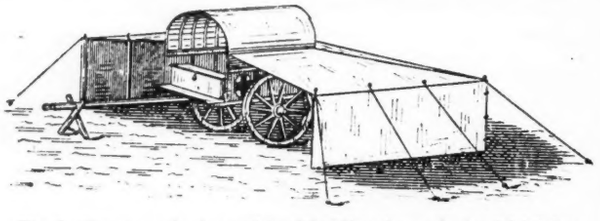

Fig. 3.—Ox-wagon tent, capable of holding from six to eight lying-down cases.

wheeled transport. A stretcher with a folding framework of iron tubing was found more satisfactory in the dry climate than the home pattern with wooden poles. A well arranged ox-wagon tent is illustrated in Figs. 3, 4 and 5. It can, it is stated, be put up by two men in ten minutes, and will protect six to eight men lying down from wind and weather.

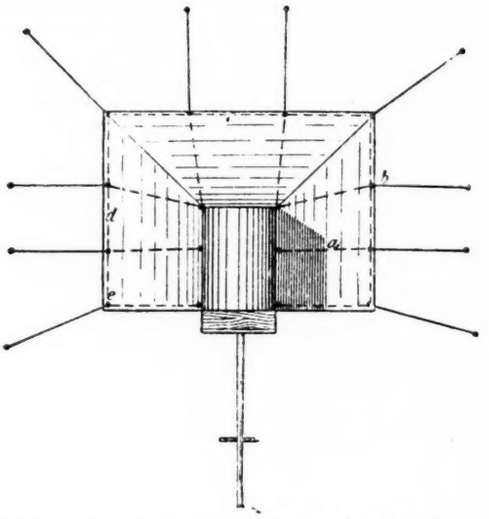

Fig. 4.—Plan of top of ox-wagon tent (for explanation of lettering see Fig. 5).

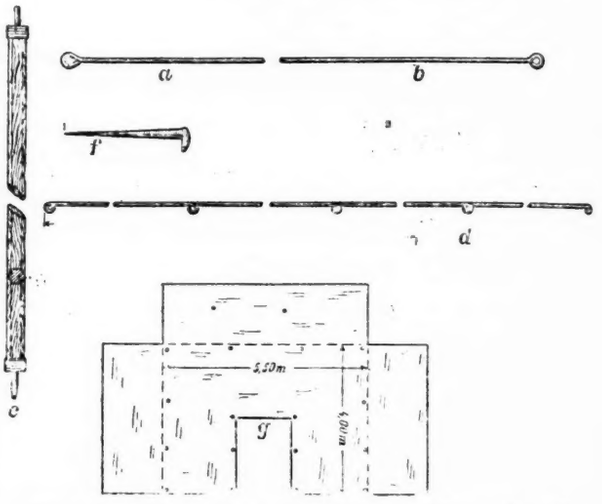

Fig. 5.—Details of supports and awning. *a*, *b*, Supporting rods and crosspieces for top; *c*, *d*, connecting rods, 5.40 m. (17 ft. 9 in.) and 3.95 m. (12 ft. 2 in.); *e*, tent pole, 1.60 m. (5 ft. 3 in.); *Q*, section; *f*, tent peg, 0.30 m. (1 ft.); *g*, canvas spread out.

Sea Transport.

When sending the troops home again precautions were taken to prevent the introduction of disease into Germany. In addition to the usual medical inspection before embarkation, all men who were known to have suffered from typhoid fever or dysentery were bacteriologically examined. Some interesting observations are given on the number of typhoid carriers detected; the percentage in 1,944 men examined was 2.93. These cases were embarked under special precautions to safeguard the other troops on board. Most careful examinations were again carried out on their arrival in Germany.

The Work of the Voluntary Aid Societies.

The German Red Cross Society provided a number of hospital attendants, while the Frauenverein für Krankenpflege furnished 31 war reserve sisters. Some of these in addition to nursing undertook letter writing for the patients in hospital; others superintended the hospital cooking and washing, and thus added very materially to the comfort of the sick.

The Red Cross Society also acted as a receiving and forwarding agency for voluntary gifts sent to the troops, and. in addition, spent some £40,000 on small comforts.

The report shows that the work and difficulties of the German medical services in the South-West African expedition were similar to those experienced by our own

services in numerous colonial wars; none of our official reports, however, enter so fully into details as does this report, hence it should prove of great value for future reference.

THE SPECIAL RESERVE, ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL E. M. WILSON, R.A.M.C. (R.P.), delivered recently at St. George's Hospital an address on the conditions of service in the Special Reserve, Royal Army Medical Corps, and in conclusion gave a short account of the Officers' Training Corps. He said:

It may be convenient in commencing the description of the Special Reserve of the Royal Army Medical Corps to clear the ground by saying what it is *not*, because there are now so many branches of the medical profession in connexion with the public services that there may be some confusion.

It has nothing to do with the method of obtaining a commission in the regular forces of the Royal Army Medical Corps. We should all be glad to see as many St. George's men as possible competing for commissions in the Royal Army Medical Corps, that corps of which John Hunter was once Director-General, but, as Rudyard Kipling says, "that is another story." The connexion with the regular army will be explained later on. Neither has it anything to do with the Royal Army Medical Corps Territorial Forces, the field ambulances, or the general hospitals; and here the separation is complete. A commission cannot be held in the Territorial Forces and the Special Reserve at the same time.

Many St. George's men have served, and are serving, in the Royal Army Medical Corps Territorial Forces (formerly Militia and Volunteers), and I would strongly urge any young medical man settling down in practice to consider the advisability of joining his local corps, but he should clearly understand that the position of an officer of the Royal Army Medical Corps Territorial Forces is that of a member of a complete organization to serve at home in case of invasion, while that of an officer of the Special Reserve is primarily to serve abroad in case of war.

The situation is this: The establishment of the Royal Army Medical Corps (regular army) is about 1,000, of whom 400 are usually serving at home in times of peace. If mobilization were to be ordered, this number would require to be enormously increased at once. In round numbers, 600 are required for four divisions and a cavalry division sent on active service. Where are these men to be got? The answer, of course, has always been up till now, "Employ civil surgeons." I do not know whether it crossed the Director-General's mind that, as I was a civil surgeon myself, I might have something to say on this point, but the fact remains that rather more than thirty years ago I went out to South Africa, on the recommendation of Mr. G. D. Pollock in that capacity during the Zulu war, and served for nearly a year before entering the Royal Army Medical Corps.

When the South African war began in 1899 I happened to be employed at the War Office, and the contracts and conditions of service for the numerous civil surgeons whom it was found necessary to engage were framed on the same lines.

It would of course be absurd to suppose that any nation would maintain a permanent medical corps of trained officers, far more than is necessary in times of peace, on the chance that they might be required in time of war; and, on the other hand, the hasty collection of a large number of young medical men to serve abroad with an army in the field has not been found in practice to be altogether satisfactory. It has therefore been decided in connexion with our profession to create a "Special Reserve" of officers who will undertake to serve abroad with an army, should their services be required.

The reasons for preferring commissioned medical officers to civil surgeons may be considered under two main heads—first, the advantage to the army; and, secondly, the advantage to the civil surgeons themselves.

The State obtains a commissioned officer serving under military law, and trained to a certain extent in military medical administration. I hope that no one will imagine because he is a fully qualified medical practitioner there is either nothing to learn, or, if there be, that it is all unnecessary routine, what is commonly known as "red tape" or "office work." Though all routine duties are cut down as much as possible in the field and relegated to "the base," where the unfortunate live who do all the work and get none of the glory, a considerable amount of official work must be done in the field, and especially in the hospitals, and I will only instance three subjects affecting our own profession.

First.—The General must know from day to day and from week to week how many fighting men he has at his disposal. This means an accurate daily and weekly statement of sick and wounded in all hospitals. Similarly, the colonels of regiments and corps must be kept informed when any men are coming back to duty or are being invalided.

Secondly.—There is an intense and very natural desire on the part of friends and relations at home to know how their husbands, brothers, and sons in hospital are getting on, and it would be impossible to furnish this information unless accurate records were kept of admissions, discharges, and transfer of all officers and men in all hospitals. This correspondence, official and private, regarding individuals has grown enormously in the last few years and imposes a great amount of labour on every hospital staff, of which every officer has to take his share.

Thirdly.—From these hospital returns the medical history of the campaign has to be written, not only the effects of wounds caused by modern weapons, but the incidence of different diseases, both subjects of the utmost importance as regards future wars. These records and invaliding boards are also most important as regards individuals financially, as by these means the pensions of those disabled are assessed.

Without troubling you with questions of sanitation, hospital supplies, clothing, and equipment, you will, I am sure, agree that there are things to be done in a military hospital in addition to the surgical and medical attendance on the patients.

Besides this, it is a great advantage to the army and to the individual that every one in the position of an officer should have the definite status conferred by a military commission.

It may seem a truism to say that with an army in the field military law is supreme, but perhaps it may not be clearly understood that every one who is not an officer or a soldier is a camp follower, without any authority whatever.

It would not matter so much if all the civil surgeons were in the large hospitals where they would have nothing but professional duties to perform, but this cannot be guaranteed in a big campaign. Our lines of communication are almost always of great extent. From Capetown to Pretoria is nearly 1,000 miles. From Cairo to Khartoum it is 1,400. Small posts are constantly being formed or small columns sent out; convoys must be sent back towards the base, etc, and commissioned medical officers cannot always be spared. Civil surgeons must be employed, and then when on detached duties they feel the want of the authority conferred by a commission.

I well remember being sent down from Maritzburg to Durban in 1879 with a big convoy of sick. There were no railways in those days except for a few miles out of Durban, and the sick were conveyed in wagons. I had no one with me to preserve discipline; the men were convalescent, and as they had already been invalided were a little difficult to control, and I had the cheerful information that the last convoy taken down by a civil surgeon had got out of hand altogether, and one of the men had been actually lost. I felt badly then the want of the mark on the arm or the shoulder, the star or badge denoting the possession of military rank and authority. Still, we got through! I am afraid, like "the little orficer boy with the big drunk draft" in Rudyard Kipling's story, I adopted some unconstitutional methods of preserving discipline but I handed over my convoy at Durban after three o four days' march "all present and all sober."

For some time I was alone in charge of a hospital in a detached fort in Zululand with one most inefficient hospital sergeant. I do not think the sick suffered because I looked after them myself, but the returns, of which I, of course, knew nothing, certainly went wrong, and I received a sarcastic letter from the Surgeon-General: "Please be more

careful in your returns," he wrote; "the 99th Regiment of Foot are *not* Irregular Horse." Well, I did not suppose they were, but my fool of a sergeant had made some stupid mistake. Later on the Surgeon-General came through my post, punished my sergeant and took him away, so that I was rather worse off than before.

On occasions like those you must learn and teach yourself, but if I could have had three months' training in a military hospital before I left England things would have been easier.

The New Special Reserve; Conditions of Service.

A candidate must be a fully-qualified medical man under 30 years of age; he is liable to be called up for army service at home or abroad at a time of imminent national danger or great emergency when the army reserve is called out until his services are no longer required. This liability is for one year only, and can be renewed annually up to the age of 40. If he wishes to terminate his liability at any time he must give a month's notice before the end of any year of service, but if in any special case the enforcement of this liability is represented to be prejudicial to his professional prospects, the case will be specially considered by the Army Council.

A candidate makes an application on a special form, makes a certain declaration, and gets a certificate of moral character, and is medically examined as to his fitness. If accepted he will be required to undergo three months' training at Aldershot. This course is similar to that undergone by officers on probation of our own corps and the Indian Medical Service.

There is now a class just joined at Aldershot, but candidates can join at any time convenient to themselves.

On joining a candidate gets a gratuity of £20 for uniform, but has to guarantee to serve four years in the Special Reserve or refund one-fourth for each year if he withdraws before the end of the fourth year. This uniform allowance covers the cost of service dress with greatcoat, mess dress, sword, etc. Full dress is not necessary. Pay during this three months' course is 14s. a day and a servant, or servant's allowance at 1s. a day, lodging allowance at £1 a week if in lodgings, or half allowance if in barracks in unfurnished quarters, are provided. The three months' training consists of drill, stretcher drill, interior economy of the R.A.M.C., military law, work with field ambulances, sanitation and hospital administration at one of the large hospitals at Aldershot. Candidates can also pass through the riding school if they wish. I do not attempt to disguise from any intending candidate that his time during these three months will be very fully occupied, but I am sure that there must be many young men who have just qualified who have more than three months to spare before they finally settle down in practice, and I am quite certain that they will never regret the time they spent at Aldershot. At the end of the three months an inspection or examination (not formal or written) will be held by the principal medical officer by whom the certificate of proficiency will be granted. The candidate will then be entitled to an annual gratuity of £20 for each year in which he remains in the Special Reserve up till 40 years of age. If he wishes to withdraw he can, as I said before, give a month's notice, and then his liability to serve and the £20 both cease together.

The candidate is then a lieutenant R.A.M.C. Special Reserve, and when he wishes to qualify for promotion to the rank of captain, after three and a half years' service he must come up again for training for one month. This month's training is not necessarily at Aldershot. He may come up at the head quarter hospital of any command nearest the place where he is in practice. This may be called a refresher course, and for this he gets the same pay as before and 4s. a day messing allowance. He is then promoted to the rank of captain, and to the rank of major on the completion of twelve years' service without further training. The annual payment of £20 does not continue beyond the age of 40, but an officer can serve until the age of 45 if a captain, or until 48 if a major. Gentlemen holding these commissions will have preference before other medical men for military employment in stations where full-pay R.A.M.C. officers are not employed.

This of course refers to the ordinary procedure in times of peace. If war were declared, officers of the Special Reserve, R.A.M.C., would be called up, and become part and parcel of the army until their services were no longer required. They would be posted to general hospitals, field ambulances, or regiments in the field, or perhaps to military hospitals and dépôts at home, as necessary; and then of course they will receive the pay of their rank and allowances like every one else. They would receive at once £50 for compensation on being called up and to provide kit, etc., and a similar grant of £50 on the conclusion of hostilities.

They would be eligible for permanent commissions in the R.A.M.C., provided that a lieutenant was under 30, or a captain under 40, years of age. Many civil surgeons accepted commissions in this way after the South African war, and no doubt others would do so again in similar circumstances.

The Officers' Training Corps.

I have left to the last a description of the method by which medical students who have not yet qualified can obtain admission to the Special Reserve on modified and advantageous terms, that is, by joining the Officers' Training Corps. All universities, including the University of London, have Officers' Training Corps, and the University of London, like others, has special medical units. If students of St. George's Hospital choose to join this training corps and put down their names to join the Special Reserve of Officers they will be regarded as on probation for a period not exceeding two years. They must obtain (in the Officers' Training Corps) the certificates of proficiency A and B and when they are qualified professionally they must join like the others at Aldershot, but the three months' training will be reduced, by fourteen days if they have got Certificate A, or by six weeks if they have got A and B. They will get an additional gratuity of £35, and their commissions will be antedated with effect from the date of their first appointment on probation. They will thus gain a very considerable advantage over men joining after they have qualified professionally both in seniority and in additional gratuity.

CONCLUSION.

I should like to ask one question. Do not you think, apart from the pay and advantages set forth in the conditions I have just read, that you should as a matter of duty assist in some way towards the protection and defence of your own country? When the greatest living soldier gives up his well-earned leisure to tell us in the House of Lords and on public platforms that all is not well with our army and that we are not safe from invasion, do you think that your whole duty is done when you have paid rates and taxes?

Your seniors do not think so. If you were to look at the Army List you would see the names of many hundreds of medical men, many men in general practice, leading men in our great cities, professors in our universities all willing and anxious to take their share in National Defence; organizing and maintaining Field Ambulances in the Territorial Forces, serving in, or guaranteeing to serve, in the great Military General Hospitals in time of need, giving up their spare time to learn new duties without fee and without reward. Are the juniors going to do nothing even though their services are to a certain extent paid? So far as our own profession is concerned the terms of service have been most carefully considered and have been made as easy and flexible as possible.

UNIVERSITY OF LONDON OFFICERS' TRAINING CORPS.

Medical Units.

The first annual report of the Military Education Committee to the Senate of the University for the year 1909 has been presented. The contingent as at present sanctioned consists of an infantry unit of six companies, an engineer unit of one company, and a medical unit of three sections of a field ambulance. An application has been made, and is under the consideration of the War Office, to organize an artillery unit of one section of field artillery, a transport section of the Army Service Corps, and a fourth section of the medical unit.

The general head quarters of the contingent are at the University of London, South Kensington, where a number of rooms have been set apart. St. Bartholomew's Hospital provides head quarters for "A" section of the medical unit, Guy's Hospital for the "B" section, and University College Hospital for the "C" section. It has been necessary to attach cadets to sections with head quarters at other hospitals than their own. Thus students of London, Charing Cross, and King's College Hospitals are posted to the "A" section of the medical unit (head

quarters, St. Bartholomew's Hospital); students of St. Thomas's Hospital are posted to "B" section of the medical unit (head quarters, Guy's Hospital); and students of Middlesex Hospital are at present posted to "C" section of the medical unit (head quarters, University College Hospital). Subject to the approval of the War Office to the necessary augmentation of establishment, the sixty-four students of Middlesex Hospital who are at present members of "C" section will be organized as a fourth section ("D" section), with head quarters at Middlesex Hospital.

The officers of the medical unit are as follows:

Majors:	
Herringham, W. P., M.D. ...	Physician, St. Bartholomew's Hospital.
Tooth, H. H., M.D., C.M.G. ...	Physician, St. Bartholomew's Hospital.
Captains:	
Gray, A. M. H., M.D.	Physician to the Skin Department, University College Hospital.
Davies-Colley, R., M.A., M.C.	Obstetric Assistant and Registrar, Guy's Hospital.
Lieutenants:	
Briscoe, J. C., M.D.	King's College Hospital Medical School.
Layton, T. B., M.S.	Surgical Registrar, Guy's Hospital.
Johnson, A. E., M.B.	Resident Medical Officer, Middlesex Hospital.
Mathison, G. C. McK., M.B....	Teacher of Physiology, University College.

At the date of the report the total strength of the medical unit excluding officers of the permanent staff was 288, "A" section having 3 officers and 71 cadets, "B" section 2 officers and 92 cadets, and "C" section 3 officers and 117 cadets. Of the total St. Bartholomew's Hospital furnished 49, St. Thomas's Hospital 25, Guy's Hospital 67, the London Hospital 7, the Middlesex Hospital 64, Charing Cross Hospital 2, University College Hospital 52, and King's College Hospital 12.

The University Contingent underwent its first annual training at West Down North, Salisbury Plain, from July 30th to August 13th, 1909. The training of the medical unit included three days' work with ambulance wagons and horses. The annual inspection was held at the camp on August 11th.

SCIENCE NOTES.

THE ingenuity of our most approved fly-traps and cages is crude beside that displayed by the inhabitants of some of the villages in Mexico. They keep spiders to rid their houses of flies, much in the same way as we keep cats to clear the house of mice. The curious custom dates from before the time of Columbus. The spider in question, called the mosquero, is a small one of its kind, and lives in nests, which it builds in the branches of trees, particularly oak trees. At the advent of the rainy season flies invade the houses in great swarms, but the villagers are already prepared. Going out into the woods they select a small oak branch thickly laden with spiders' nests. They hang this from the ceiling of their room, and the spiders speedily proceed to the business of decimating the flies. The nest of the mosquero is rather a curious habitation. The exterior is formed of a web of plaited threads; the interior is filled with a network of simple threads among which numerous spaces and passages are arranged. Throughout the nest a large number of minute beetles are to be found. They play the part of commensal, and their business appears to be to attend to the cleanliness of the nest. They live on the crumbs from mosquero's table, and in return they clear up and remove all the remnants from the passages. This is deposited in special receptacles at the bottom of the nest. In this way not only is the nest kept clean, but the house also in which it is hung. Mosquero herself is a *nonchalant* creature, never seen beyond her own door, preferring the quiet comfort of her back parlour. When a fly calls on business, however, she is very alert, and soon arranges matters to her own satisfaction. When the "fly season" is over all the adults leave the colony in a body and make their way out of doors to pass the winter. The young ones, however, are left behind in the nest, and they begin active operations the following year. For an interesting account of this strange habit we are indebted to M. Léon Diguet.[1]

Dr. C. J. PATTEN, M.A., Professor of Anatomy at the Sheffield University, recently delivered a lecture at the Railway Institute, under the auspices of the North-Eastern Railway Natural History and Scientific Society, on observations made during a voyage across the Atlantic and across Canada on the occasion of the visit of the British Association to Winnipeg last summer. Wishing to take the opportunity of seeing all the animal life possible on the journey, he has chosen to cross the Atlantic in a comparatively small steamer—the Allan liner, *Pomeranian* a vessel of some 4,000 tons. One of the advantages of a smaller steamer was that it was easier to become friendly with the captain and crew, who would always be of assistance in looking out for singular birds, mammals, or fishes. Moreover, on a small boat it was possible to travel rapidly from stem to stern and keep in view quite easily birds, fishes, etc., around the steamer. The vessel called at Havre, but only the whitethroat was observed there, a specimen alighting on the boat. It was very tame and in excellent plumage. On getting under weigh the fulmar-petrel—a real petrel, not a gull—was seen. The great shearwater, which got its name from the fact that it seemed to "sheer" through the water, was also met with. It was commonly found in the South Atlantic, but was often seen in the North also. The skua was also seen. It earned its livelihood by plunder, and on approaching a flock of gulls singled out a bird which had just had a good dinner—never going near those which had not dined—and setting the bird on the wing followed it about, always keeping underneath, and often making a curious moaning noise. This action caused the gull to disgorge the fish, which was caught by the skua before it reached the water. Professor Patten mentioned the porpoises and dolphins met with, described the Greenland seal, and added that at the entrance to the St. Lawrence River some beautiful icebergs were encountered. Interesting slides were shown of the Red Indians, their squaws, wigwams, etc. The Redskin—who was really more copper-coloured than red—had many characteristics of the American, not the least of which was his love of the almighty dollar. Nearly every group approached were willing to be photographed, provided the necessary fee was forthcoming. The journey from the East Coast to Winnipeg was principally through forest but bird life seemed very scarce. On the prairie, however, life of every description was extremely prolific. The buzzard, met with in numbers, had an extremely interesting and graceful flight as it opened the wing feathers out something like a comb, and the precision showed in following its prey was remarkable. It was no uncommon sight to see four or five of them hunting together. The prairie wolf, sometimes mistaken for the dog, was observed, and marmots, gophers, and squirrels were also met with. The latter animals were larger than the British species, and of an excitable and lively disposition. Professor Patten visited the herds of buffalo in the Government preserves. Views of the fishing station at Naimo were shown, and the life on the great land-locked seas of Lakes Superior and Ontario traversed on the return journey was dealt with. He mentioned that the kitzwater followed the vessel on the homeward journey all the way across the Atlantic—a very unusual occurrence.

AT a recent meeting at Accra, Gold Coast, West Africa, of the Legislative Council of the Colony, on the vote for supplies, when that for the Medical Department came up, one of the unofficial members complained of the fees charged by the Government medical officers for medical attendance on private patients, and urged that some scale of charges should be laid down by the Principal Medical Officer. He suggested a fee of £10 a year for each man for mercantile employees, or a fee of 10s. a day. In the course of his remarks this unofficial member expressed the opinion that medical officers should not be allowed to resort to private practice with a view to increasing their salaries. We are informed that the usual fees for attendance for a short illness is 1 guinea a day; for a long one deductions are usually made. If a retaining fee be agreed upon, £30 a year is the standard charge. Our correspondent considers that in view of the high prices charged by the merchants, especially in inland stations, for European goods, these fees are not excessive. If the contention that the Government medical officers should not supplement their salaries by fees from private patients is to be sustained, then the salaries offered to these Government medical officers should be such as to render them quite independent of private practice, especially in the West African Medical Service. Meanwhile the question of fees is not one with which the Government has anything to do. If the Government medical officer is allowed private practice, he is quite at liberty to charge a fee which shall in the circumstances be adequate. As a retaining fee, in a comparatively unhealthy colony like that of the Gold Coast, £30 per annum certainly does not seem an exorbitant sum.

[1] *Comptes Rendus Assoc. France*, cxlviii, 1909, p. 735-6.

THE TROPICAL DISEASES RESEARCH FUND.

As was stated last week, the report of the Advisory Committee for the Tropical Diseases Research Fund for the year 1909 has just been issued. The fund was started by the Secretary of State for the Colonies in July, 1904, and Sir J. West Ridgeway has been its chairman throughout. At the present time the other members are: Sir Thomas Barlow, Bart., K.C.V.O.; Sir Thomas Holderness, K.C.S.I.; Sir Charles Lucas, K.C.M.G., C.B.; Sir Patrick Manson, K.C.M.G., F.R.S.; Dr. J. Rose Bradford, F.R.S.; Surgeon-General A. M. Branfoot, C.I.E., I.M.S.; Mr. H. J. Read, C.M.G.; Major Ronald Ross, C.B., F.R.S.; and Mr. A. Berriedale Keith (Secretary).

The following tables show the revenue and expenditure of the fund during the four years:

Revenue.

	1906.	1907.	1908.	1909.
	£	£	£	£
Imperial Government	500	500	1,000	1,000
Indian Government	500	500	500	500
Rhodes Trustees	200	200	200	200
Commonwealth of Australia ..	200	200	200	200
Southern Nigeria	200	200	200	350
Southern Nigeria (Lagos) ...	150	150	150	—
Gold Coast	200	200	200	200
Ceylon...	100	100	100	100
Straits Settlements	100	100	100	100
Federated Malay States ...	100	100	100	100
Hong Kong	100	100	100	100
Trinidad	100	100	100	100
Fiji	100	100	100	100
Sierra Leone	100	100	100	100
Gambia	100	100	100	100
British Guiana	100	100	100	100
Grenada	50	50	50	50
St. Kitts-Nevis	—	—	—	25
Dominica	—	75	—	25
St. Vincent	—	—	—	20
Mauritius	100	100	—	—
Total	£3,000	£3,075	£3,400	£3,470

Expenditure.

Grants to:	1906.	1907.	1908.	1909.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
London School of Tropical Medicine	1,000 0 0	1,083 6 8	1,333 6 8	1,383 6 8
Liverpool School of Tropical Medicine	500 0 0	500 0 0	1,000 0 0	1,000 0 0
University of London...	750 0 0	750 0 0	750 0 0	750 0 0
University of Cambridge	—	100 0 0	100 0 0	200 0 0
Australian Institute of Tropical Medicine	—	—	400 0 0	—
Royal Society	500 0 0	—	—	—
Total	2,750 0 0	2,433 6 8	3,583 6 8	3,333 6 8

The Committee in allocating the funds placed at its disposal was actuated by the desire of obtaining the establishment of the study of tropical diseases on a secure basis, and with this object in view has endeavoured on the one hand to encourage the provision of instruction in regard to tropical diseases for medical officers employed in the colonies and protectorates, and on the other to encourage research work and investigation as to the nature and causes of such diseases. In fulfilment of both objects the grants made to the London and Liverpool Schools of Tropical Medicine have, as will be seen from the table, been increased to £1,383 in the case of the London and £1,000 in the case of the Liverpool School. Of the amount paid in 1908 to the London School, £1,000 was devoted to the payment of the salary of a teacher and investigator of protozoology, and of the salary of a teacher and investigator of helminthology, and to the maintenance of the laboratories. In 1907 the London School applied to the Committee for an increased grant in order to enable it to establish an entomological post in the school. The Committee responded by making a grant of £1,000, to be spent over three years, on condition that the entomologist should undertake to make a collection of the noxious insects of the colonies, a separate collection to be made of those from each colony, and all the collections to be kept in readiness for reference by colonial officials or doctors. It was provided also that the person appointed should be ready to advise on questions referred to him by the Committee or by colonial Governments. Under this grant Colonel A. Alcock, I.M.S., C.I.E., F.R.S., was appointed arthropodologist.

The grant to the University of London provides the salary of the professor of protozoology. The grant of £100 made in 1907 and 1908 to the University of Cambridge was for a research studentship in medical entomology, and the augmented grant last year was made in respect of general expenses of the Quick Laboratory, in recognition of its importance to workers from the colonies, and of the assistance rendered to investigators by Professor Nuttall.

The grant to the Royal Society made in 1906 for the furtherance of research in sleeping sickness was not repeated, because it was found possible in subsequent years to provide from the funds of the Uganda Protectorate the sums required for the continuation of the researches into sleeping sickness which have been carried on under the supervision of the Society.

The grant of £400 made from the fund in 1908 to the Australian Institute of Tropical Medicine at Townsville, Queensland, was towards its establishment, but it is understood that there can be no doubt that adequate contributions for the maintenance of the institute will be raised in Australia. In this connexion it may be stated that in 1908 the Committee had under its consideration a proposal by Dr. W. M. Strong, acting chief medical officer of Papua, suggesting that a scientific expedition should be sent to that dependency for the purpose of investigating tropical diseases. The Committee, while expressing the opinion that Papua offers a great field for important work on tropical diseases, suggested that the question might more suitably be considered after the establishment of the Institute at Townsville, when it might be possible for the director or his assistant to take part in the expedition.

Appended to the report for each year is a summary of the efforts made in the colonies to combat malaria, and of the results of those efforts. To the report for 1909 is appended a circular dispatch addressed by the Secretary for the Colonies on March 31st, 1909, to all the tropical colonies in which malaria is prevalent, dealing with preventive measures adopted in Italy against the spread of malaria, and inquiring to what extent the same measures could be adopted in those colonies. From the replies received the Committee concluded that, considering their limited resources and the many difficulties to be met, much has been done in the tropical colonies to combat malaria, and calls special attention to the full and excellent statistics furnished from Ceylon. The Committee adds that the report from Mauritius shows how much can be done at a small outlay. Dr. L. G. Barbeau, the Acting Medical Director, had reported that, owing to the limited resources available, the work done had of necessity been confined to individual buildings or small areas, so that the results, though satisfactory in themselves, have had little effect on the general death-rate of the island. In addition quinine had been distributed free to the poor and at a nominal price to those able to pay, from 28 dispensaries and 36 quinine dépôts in the more malarious portions of the island, while itinerant dispensers had been employed when occasion arose to supply the sick with free medicine in certain other districts. It will be remembered that Major Ronald Ross, F.R.S., visited the colony and presented a valuable report. Dr. Barbeau reported that previous to Professor Ross's visit certain Government buildings had been protected against mosquitos by wire gauze screens. It had not been possible, owing to want of funds, to extend mechanical protection

to other buildings, but the following measures had been carried out:

1. With the kind assistance of the Education Department the school children throughout the colony are periodically examined by the medical officers of this department, and quinine is issued free to the school teachers for the treatment of those found with an enlarged spleen.
2. Efforts have been, and are being, made, with the co-operation of the Immigration Department, to secure a similar treatment for the children on the sugar estates, and to ensure that labourers affected with malaria should be submitted to a continuous course of the drug.
3. A house-to-house spleen census is being made at Port Louis by three of the medical officers attached to this office, who take advantage of the opportunities thus afforded them to distribute quinine free of charge to all persons requiring and willing to take it.
4. House-to-house distribution of quinine is also being made in the extra-urban area of Port Louis by the dispenser in charge of the G.R.N. West Plague Lazaret.
5. Government servants receiving less than Rs. 720 per annum are supplied with the drug free of charge on applying at a hospital or dispensary, or through the head of their department.
6. Minor works are being carried out in extra-urban Port Louis by two moustiquiers and four malaria gangs of three labourers each; in the other districts by the moustiquiers and gangs under Mr. D. Emmerez, by the sanitary bands of Mahebourg, Souillac, and Rose Belle, and by prison labour in the rivers of Plaines Wilhems, Pamplemousses, and Flacq, while such preliminary work as could be undertaken has been commenced for the drainage of the swamps of La Louise and the Curepipe Marshes.
7. Major works are being carried out under the supervision of the sanitary engineer at Pamplemousses and centre of Flacq.

The report for 1909 contains a number of appendices, including the report of the professor of protozoology. Owing to the additions and structural alterations in progress at the Lister Institute, the work there had been partially interrupted, and the professor in company with Dr. Woodcock, spent some time at the zoological station at Rovigno, in Austria, and later another period, accompanied by Dr. Thomson, at Mr. Gurney's laboratory at Sutton Broad, Norfolk, studying the blood parasites of fresh-water fishes. In addition to the last-mentioned subject, the trypanosome of the common rat had been investigated, and, in collaboration with Dr. Woodcock at Rovigno, the blood parasites of the little owl. As the trypanosome of the common rat *T. lewisi* is harmless to those animals, it affords a very favourable object in which to study the zoological aspects of the trypanosome problem. In conjunction with Dr. J. D. Thomson, a number of experiments had been made, the principal conclusions of which were:

1. Can the rat-flea transmit *T. lewisi* from infected to healthy rats? An answer in the affirmative was soon obtained to this question, though the results are sometimes negative. I believe that in many cases tame white rats are refractory to the infection; it is shown by the ordinary method of intraperitoneal inoculation of blood from infected rats that the infection does not always take effect. Sometimes the rats acquire only a very slight and transitory infection, easily overlooked. Hence negative results must be discounted.
2. Is the transmission of the direct mechanical kind, or does it indicate a cycle in the invertebrate concerned? I have found an interval of about three weeks, more or less, between the removal or death of the infected rat and the appearance of the infection in the previously healthy rat. This result, similar to that obtained by Professor Kleine in the transmission of pathogenic trypanosomes by tsetse flies in Africa (confirmed by Sir David Bruce), is incompatible with direct infection, and indicates the existence of a cycle or development in the flea.
3. When the fleas have once become infectious, do they retain this property? In cages in which an infected rat has been placed for a short time and removed, I have had successive infections of healthy rats introduced and changed, so soon as they became infected, for other healthy rats. This indicates that when once the fleas have become infected they retain their infective power for some time, as Kleine found also with tsetse flies.

The teaching work done by the professor included a formal course of twenty-three lectures followed by demonstrations, and informal instruction or help given in the laboratory to workers, or correspondence.

In another appendix are reports from the London School of Tropical Medicine. The arthropodologist reported that collections of insects had been received from the Soudan and Uganda, and from Calcutta, and a fine collection of venomous snakes from the United States National Museum. The reference collection of selected specimens of authentically-named species was steadily increasing. In each of the two sessions included in the half-year ending April, 1909, courses of lectures and demonstrations on arthropoda and thanatophidia were given; the lectures were repeated in the summer session, and special advanced courses were instituted in medical entomology.

The report of the helminthologist, Dr. R. T. Leiper, stated that in addition to four systematic lectures and a laboratory course, Dr. Arbuckle (Sierra Leone Colonial Medical Service) and Dr. A. C. Parsons (Northern Nigeria Colonial Medical Service) had worked in the laboratory. Gifts of collections of helminths had been received from Dr. Graham (Gold Coast), Dr. Stanton (Malay States), Dr. Pearson (Congo), Dr. Sells and Dr. Bayon (Uganda), and Mr. Foy (Northern Nigeria). The helminthologist had devoted a considerable amount of time to the structure and relations of the filaria, with special reference to the human forms, and had investigated also the parasites of grouse disease. Considerable additions had been made to the collection of helminth parasites of man and of the lower animals. The report of the protozoologist, Mr. C. M. Wenyon, stated that investigations had been directed chiefly to the effect of soamin on *T. gambiense*, to investigations on intestinal protozoa, and on trypanosomes and other blood parasites. During the summer an advanced course was instituted.

The reports of the Liverpool School of Tropical Medicine included a report from Dr. Breinl, at that time Director of the Runcorn Research Laboratories, enumerating the investigations there made chiefly by the Director and Dr. Nierenstein on trypanosomes. Mr. Robert Newstead, Lecturer in Economic Entomology and Parasitology, in his report gave an account of the expedition to Jamaica in November, 1908, and a summary of the work with regard to cattle ticks, insects, and other pests injurious to cultivated crops, and the food of birds in relation to agriculture. Drs. Barratt and Yorke had completed their report on the blackwater fever expedition, and had been able to show that the mechanism of production of blackwater in *Piroplasma canis* and in blackwater fever was similar. Dr. Yorke had failed to confirm Professor Nuttall's conclusions as to the beneficial effect of trypan-blue in the treatment of *Piroplasma canis*.

A further appendix contains reports of the work done in the clinical laboratories in Barbados, in British Guiana—chiefly with regard to leprosy and the effect of nastin—at the Clinic for Tropical Diseases and Bacteriological Institute directed by Dr. Castellani in Ceylon, in the bacteriological department of the East Africa Protectorate at Nairobi, and in the Institute of Medical Research of the Federated Malay States, directed by Dr. H. Fraser at Kuala Lumpur.

In a special appendix is a memorandum by Dr. Clarke, medical officer of Batu Gajah, Perak, on the use of parboiled rice for beri-beri patients, confirming Dr. Braddon's conclusion that the only practical way of preventing beriberi is to prohibit the sale of any rice which is not either freshly made, or has not been cured by boiling or heating in the husk before stripping.

MOTOR CARS FOR MEDICAL MEN.

COUNTRY DOCTORS AND MOTOR CARS.

DR. THOMAS FENTEM (Catcliff, Bakewell) writes: I feel that the somewhat extraordinary statement made by Dr. Allan Wilson under the above heading on p. 594 ought not to be allowed to pass unchallenged. He says a motor car for a medical man "can scarcely be considered a boon or a blessing to his patients, because, when he is going from house to house on his daily rounds, his thoughts and attention, that should be occupied with the contemplation of the nature and treatment of the diseases which come under his notice, are, by necessity, directed to the steering of his car."

As one who has driven horses, sat beside a person driving horses, and who now personally drives himself in a reliable motor car in the conduct of a country practice, also in a fairly scattered district, I can say that, from the point of view of the patient, I find the motor infinitely to his benefit over the two other modes I have indicated. My experience is that one arrives at the patient's bedside much more alert and less jaded after a long round than with horses; and, getting over the ground more quickly, one reaches home earlier than one could with horses. One therefore has more leisure to give to the consideration of the patients' cases in the quiet of one's study and amongst one's books, and that surely is better than trying to do this sitting beside a coachman, even if one's thoughts are stimulated by such accompaniments as blinding snowstorms, driving rain, gales of wind, and such like.

The driving of a car becomes after a short time largely automatic, and this applies, perhaps, most of all to the

steering, the task which Dr. Allan Wilson appears to think requires such deep mental application as to banish all else from one's mind.

I will not believe that he has any experience in the driving of a car unless he assures me that he has, and I trust, for his own reputation, he cannot do this.

Dr. F. L. Nicholls (Fulbourn, Cambridge) writes: Dr. Allan Wilson, in a somewhat remarkable letter, says: "The practitioner who uses a motor car without a chauffeur is obliged to direct his whole attention to steering to avoid accident." And he also says: "I attribute my success in a great measure to the careful thought and study I was able to devote to my cases while sitting beside the coachman in a dog-cart."

First, let us consider the qualities necessary to make a skilled horseman or motor driver. Are they not self-reliance, self confidence, a quick eye, and a steady hand? and are not these just the points necessary for a successful practitioner, especially in the country, where he is dependent upon himself in all emergencies? One would almost feel inclined to think that Dr. Wilson had made one or two attempts to handle the ribbons or drive a motor and found it too much for his nerves; and if such is the case he is certainly a wise man to depend upon his coachman to see him safely on his rounds, but I cannot allow the statement that a driver's whole attention must be given to steering to avoid accidents to pass without protest. If such was the case I pity the poor driver, for at the end of a week his nerves would be in such a state that he would be good for nothing but darning stockings or doing patch-work, even if he was lucky enough to keep out of an asylum. Dr. Wilson does not appear to know that all these actions to an experienced and skilled man are almost entirely automatic. The eye and hand do the work, leaving the brain free for the consideration of any matter its owner may desire. I do not speak without experience, for I have for over forty years had the handling of horses, including the breaking-in of young ones, and for over five years I have driven a motor, and I can assure Dr. Wilson that the only time when my brain is "jumpy" is when I have relinquished the reins or wheel into some other person's hands. I am then anything but at ease; but directly I have again resumed my usual and proper place my brain is at ease and ready for the consideration of the most serious subjects connected with my practice. I can only pity Dr. Wilson for the loss of such delightful and soothing hours as an expert with horses and motors enjoys, and I hope these few lines will explode such ideas as are contained in his letter.

LITERARY NOTES.

The *Chronique Médicale* of February 1st contains an amusing account of the manner in which Claude Bernard's decoration with the Cross of the Legion of Honour was officially announced. Magendie urged the claims of his brother physiologist on the attention of M. de Falloux, then Minister of Public Instruction. Nothing was said to Bernard, who was not a man to solicit honours for himself or to induce others to do so on his behalf. When the *Moniteur* came out and he was told that his name was in the list, however, he was greatly pleased. But his pleasure changed into something like dismay when he learnt that the decoration was bestowed in recognition of his valuable researches on the *musical* properties of the pancreas. The substitution of "musical" for "medical" was rectified in a later announcement; but the fact remains that Claude Bernard was, in an official sense, decorated not as a physiologist, but as a musician.

One of the best-known figures in London during the latter half of the eighteenth and the early part of the nineteenth centuries was the fourth Duke of Queensberry, generally known as "old Q." He lived to a patriarchal age after having warmed not only both hands but the whole of his person at the fire of life. The following account of the regimen which he followed in his old age would scarcely commend itself to latter-day dietetic oracles, but seems to have suited him very well. We take it from Mr. Ralph Nevill's entertaining book, *The Merry Past*.

At seven in the morning he took a warm milk bath, perfumed with almond powder, where he took his coffee and a buttered muffin, and afterwards retired to bed. He rose about nine, and breakfasted on *café au lait*, with new-laid eggs, just parboiled. At eleven he was presented with two warm jellies and rusks. At one he ate a veal cutlet, *à la Maintenon*. At three, jellies and eggs repeated. At five a cup of chocolate and rusks. At half-past seven he took a hearty dinner from high-seasoned dishes, and made suitable libations of claret and Madeira. At ten, tea, coffee, and muffins. At twelve, supper off a roasted pullet, with a plentiful dilution of lime punch. At one in the morning he retired to bed in high spirits, and slept till three, when his man cook, to the moment, waited upon him in person with a hot and savoury veal cutlet, which, with a potation of wine and water, prepared him for his further repose, that continued generally uninterrupted till the morning summons to his lactean bath.

And the old rake lived to the age of 86, sitting at his window in Piccadilly and leering at the women who passed, and sending his servant after any one who struck his fancy! In his last days he kept always about him his French doctor, Père Elisée, formerly physician to Louis XV. He paid the doctor on something like the Chinese plan: he allowed him a large sum for every day he lived, leaving nothing at his death. It speaks wonders for the skill of the physician that he succeeded in preserving to such length of days a man who lived in the way that has been described. He must have died with all the consolations of medicine, for (according to the *Dictionary of National Biography*), after his decease, Mr. Fuller, an apothecary in Piccadilly, made a claim against the executors for £10,000 for professional attendance during the last seven and a half years of the duke's life, during which he said he had paid 9,340 visits, in addition to attending on him for 1,215 nights. A verdict was given for £7,500. Scoffers might say that but for the assiduous attention of his apothecary he might have been a centenarian.

Readers of *Our Mutual Friend* will remember the suggestion made by Captain Joey to the doctor that an apparently drowned man should be hung up by the heels "sim'lar to mutton in a butcher's shop," and then—"as a particularly choice manœuvre for promoting easy respiration"—be rolled on casks; and how Miss Abbey, the presiding genius of the Six Jolly Fellowship Porters, received this "sagacious old-scholastic" suggestion with such speechless indignation that "she instantly seizes the Captain by the collar and without a single word ejects him, not presuming to remonstrate, from the scene." If we may judge from a curious account of well meant attempts made by a French medical practitioner during the Revolution to resuscitate a drowned man, published in *La Province Médicale*, the methods in use in 1796 were a good deal more barbarous. Returning from exile at that time Jacques Bonnefoy, pilot of the town of Hyères, was in hiding. He was discovered, however, and on the point of being captured, he threw himself into the well of a neighbouring house. From this he was pulled out with much difficulty, and citizen Pierre Vérignon, *officier de santé*, was summoned to revive the flickering spark of life still left in the sailor's body. The man was first undressed, and his body was rubbed with great violence with warm cloths. Then by way of stimulation, we suppose, fumigations of tobacco were applied within the anus, and afterwards into the windpipe. This producing no result, the unfortunate man, who was 60 years of age, was bled from the jugular vein, and spirits were rubbed in over the pit of the stomach. Last of all he was rolled in a barrel with the object of emptying him of the water he had swallowed. Even this was of no avail, and the resources of science being exhausted, the civil power was called in to verify the death and order the body to be buried.

In the March number of *Travel and Exploration* Mr. Edmund Forbes writes with intimate knowledge of native life in the little travelled Siamese-Malay Peninsula. He quotes a suggestive extract from a Blue Book which throws a lurid light on the liquor traffic of the peninsula, and incidentally explains how whisky can be bought in Bangkok for 4s. 6d. a dozen. He says: "In a case of adulteration recently heard in Her Britannic Majesty's Consular Court at Bangkok, the medical adviser proved the existence of certain drugs very deleterious to health in the spirit retailed at a certain shop. The Chinese defendant admitted having added something to his liquor, which, he stated, was much improved thereby. Asked how he came to use this particular compound, he explained it was some 'medecine' which he had by him for a bad leg, and, not being able to use it all, he had put the balance in his spirit jar. He added there was a particular demand among his customers for this 'blend'!" This reminds us of a story in Marryat's *Pacha of Many Tales*, in which it is related that the body of a murdered man was hidden in a cask of wine. Some of this wine was accidentally served to the pacha, and its quality was found so exquisite that the pacha insisted on having it and no other, as the advertisements say.

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THE PHYSIC OF PERSUASION.

AT the London Polyclinic dinner some years ago Mr. Alfred Lyttelton said doctors should be the best of all speakers as they were constantly addressing people who hung upon their words, whereas the member of Parliament had to address several hundreds of men all of whom were eager to address him. What may be called bedside oratory, however, has difficulties of its own which many worthy practitioners never overcome. Well equipped for their professional work in other respects, they do not know how to talk to their patients. The difference between a successful doctor and another who, perhaps with greater mental gifts and larger knowledge, fails to win the confidence of patients, is mainly one of personality. The man who impresses sufferers and their friends with belief in himself will—assuming him to be honest—do far more good than he who, whatever may be his scientific attainments, has not the power of inspiring faith; in a word, the miracle of cure—except in one or two cases in which specific remedies are available and in the greater part of the domain of surgery—is largely wrought by suggestion. This, vague as is the connotation of the word, is not quackery; it is a real and most potent influence, though it would be difficult to define its nature. Personal magnetism, or whatever else it may be called, is the greatest moving force in education, in ordinary life, in religion, in politics, and even in business. The history of the human race, as far as it has been made by "heroes" in the Carlylean sense, is not so much "philosophy teaching by example" as a record of manifestations of suggestion. What, then, is suggestion? Simply the power of setting in act and use forces that lie hidden, and mostly unsuspected, in the depths of the average man's nature. These may be applied to the healing of disease as well as to the gaining of victories or the making of revolutions. That suggestion may be open to abuse is no reason for refusing to use it, still less to deny its reality. The fact that it is the secret of the success of quacks should make us all the more strenuous in reclaiming so useful a force for rational medicine.

In addresses to students stress is often laid on the importance of cultivating a good bedside manner. In medicine, as in life, it is true that "manners makyth man." But what is the manner that is most effective at the bedside? Here no general rule can be laid down, for the manner must be adapted to the patient. One thing, however, may be said. You may be rude like Abernethy, genial like Sir Astley Cooper, courtly like Sir Henry Halford, but like St. Paul, unless you have charity—that is to say, practical sympathy—you are nothing. Sir William Jenner used to say that it mattered little whether a doctor's manner were rugged or smooth; to kindle the hope that is more than the nux vomica which Professor Osler mixes with it, and the faith that moves mountains, the doctor must make the patient feel that he is thoroughly in earnest in his efforts to understand the case before him, and doing all that in him lies to give relief. There is nothing the patient resents so much as apparent indifference, or what he calls want of attention, on the part of the doctor. We have known an ill-timed jocularity shake a laboriously built-up edifice of faith to its foundations. On the other hand, a gloomy manner has a disastrous effect on a nervous patient. A famous physician of the past used to relate how, when taken to his first important case by a professional patron, he tried to adapt himself to the situation by assuming an aspect befitting the Knight of the Sorrowful Countenance. The elder physician, observing this, said: "For Heaven's sake, man, don't go into the sick room with that long face; they will think you are the undertaker!" By some people the doctor is regarded as a purveyor of gossip, and it is recorded that Lord Palmerston used his physician, who was in request among the leaders of society, as an indicator of public opinion on political matters. Of one fashionable physician it is related that when he paid his usual call to a fashionable patient one day he was informed, with her ladyship's apologies, that she was too ill to see him that day! One practitioner, very successful in his day, had no power of conversation, but he was a noted Amphitryon, and his table was looked upon by politicians as a neutral ground, where they might meet without any significance being attached to the fact. He made up for his lack of words by minute attention to detail. Other men have inspired faith by silence, uttering only a few oracular sentences, and sending the patient away with his curiosity unsatisfied, but fully persuaded that the physician had seen into the innermost recesses of his being.

The man of few but pregnant words inspires more confidence than one who attempts to explain the case to the patient. No one ignorant of medicine understands such explanations; the clearer they seem to be the more they bewilder the patient. The more cultivated he is in a general sense the more apt he is to form wholly wrong conclusions. A deliverance such as "You have a tired heart," or "Madam, your husband is suffering from a cachexia," is equally enlightening to the patient and much more comforting than a disquisition on the mysteries of indigestion or the effects of disordered nerves addressed to a person who knows nothing of physiology. It must be remembered, however, that at the present day the laity take much greater interest in all matters pertaining to health than was the case when everything relating to the "inside" was considered improper. Every one now has views about food, and drink, and clothing, and many boldly adventure themselves into the deep waters of pathology and healing. The medical profession has lost much of the sacerdotal character with which it was formerly invested. This disappeared with the wig and the gold headed cane. A host of self-constituted authorities on diet and the nature and treatment of disease has sprung up. This is one of the results of the advance of sanitary science, which, it seems sometimes to be forgotten, is the outcome of the work of the profession. Medicine and surgery have, in a sense, become popularized, and the amateur doctor is abroad. A little knowledge is a dangerous thing, and this is the knowledge which is so common at the present day. It forms a soil peculiarly congenial to the growth of quackery. A sound knowledge of physiology, diffused among the people, as we have often had occasion to point out, would create an atmosphere in which

quackery could not live. Unfortunately, the time is still far off when it will be as disgraceful to be ignorant of the functions of the body as to outrage grammar and misuse the letter "h."

In the meantime the doctor has to adapt himself as best he can to his environment. He will best succeed in doing this who to professional skill adds such a knowledge of human nature as will enable him, in the words of Goethe, to enter into the mind of the sufferer and imitate his manner of conceiving; this will give him the power of speaking to each patient in a way that will make him give heed to his counsel. In a word, he must persuade people to do what is best in their own interest. How much should be said to a patient must depend on circumstances, but the doctor should in all cases tell the truth and nothing but the truth. He need not, however, always tell the whole truth, for two sufficient reasons: It might not be for the patient's good; and, again, he may not be sure about it himself, and he has no right to disturb the mind of one who looks to him for comfort by suspicions which may be unfounded.

PATHOLOGICAL LYING.

JUST as philosophers distinguish different forms of truth, so there are many kinds of untruth. Between the wilful swearing to a false oath and an angler's tale there are many kinds and shades of falsehood. To define a lie is the converse of Pilate's famous conundrum—and almost as unanswerable. Theoretically the matter is simple, but in practice impossibly complicated. Kant observed that a lie might be external or internal; might be uttered, and so bring the utterer under the contempt of others; or internal, violating a man's own dignity. The internal factor, however, lurks in all lies, and it is the estimation of this factor which offers almost insuperable difficulties to a just conclusion as to the author's moral integrity, for no one but himself can be aware of his belief or disbelief in what he avows. If, as Kant asserted, in order to be veracious, man, as a moral being, or *homo noumenon*, must so use himself as a physical being, or *homo phenomenon*, as to harmonize these two, then many a fantastic falsehood is actually a kind of revealed truth, a Fata Morgana, the unconscious projection of ideational into sensational experience, or, expressed otherwise, of thought into feeling. Hence, in law courts witnesses constantly, albeit often unwittingly, say they saw things happen which never happened, and which, if they had happened, they could not have seen with the eye.

The almost inseparable fusion of fact and phantasy which is characteristic of childhood, individual or racial, distinguishes many who are all too prone to live, as it were, inside themselves, and whose spiritual experiences defy the correction of outer concrete happenings. Thus, Goethe, in his *Wahrheit und Dichtung*, says that he was accustomed in his boyhood to relate to his comrades the fictions he had invented as actual occurrences, and that, if he had not learnt to transfuse these figments, bit by bit, into his poetic creations, the consequences would have been serious for his later life. Not all, however, have this power of self-discipline. In many, through innate mental or moral weakness, the bent to lying is inveterate, and such people, "born liars," drift from public odium into contemptuous indifference, from an infamous notoriety into the obscure backwaters of a worthless and discredited dependence. The lives of Chatterton, with his sham antiques; Villon, the poet-thief, and many another to whom it might be fitly said, "Shame soiled thy song, and song assoiled thy shame," show how curiously knavery and high genius may be blended in one personality; but, as a rule, the gaol, the workhouse, or an eleemosynary penury await those so unhappily constituted that they cannot help deceiving others, since, by some inward compulsion, they must first of all deceive themselves.

Until recognized, however, such people are dangerous to others. Dr. Carl Pelmann has related[1] a case which may be taken as typical of many which have occurred in our own courts, though perhaps with less serious outcome. This was that of the 16 years old daughter of a General Morel, who was discovered in her bedroom bound hand and foot and with many superficial wounds of the thighs. With the greatest apparent reluctance, she admitted that a certain Lieutenant de la Roncières had made an unsuccessful attempt on her honour. Being unable to establish an alibi the lieutenant was sentenced to ten years' imprisonment, and only after the expiration of this term was his innocence proved and the groundless and hysterical nature of the accusation brought to light. A very similar case was tried in the Dublin courts only a few weeks ago.

Notwithstanding Pierre Janet's statement that normal people lie just as often as the hysterical, there can be no doubt that hysteria, either alone, or in combination with one or other of the miscellaneous pathological states collected together into the hotchpotch of "degeneracy," is of considerable forensic importance in this relation. Dr. Bresler, of Lublinitz, in an interesting monograph on "pathological perjury"[2] has gathered from various sources several striking instances of false accusation by hysterical people, and remembering the hyperexcitable imaginations, the deficient powers of attention and observation, and greatly heightened lability of psychic processes of these people, with, in consequence, a marked tendency to falsifications of memory and vivid day-dreams, their unenviable notoriety as at once deceived and deceiving becomes understandable.

The less common and graver forms of what Delbrück, in his able book on this subject,[3] has termed "pseudologia phantastica" occur, of course, in alcoholism, and typically as the "confabulation" of Korsakow's syndrome; it occurs also in the initial stages of paranoia, especially in paranoia quaerulens, and in masked epilepsy. In these, however, the fabulation is only a transitory symptom in the course of otherwise recognizable disease, and therefore lies outside our present purview.

But of all the forms of pathological lying of an ingrained constitutional order, that which is most commonly encountered occurs in the slightly weak-minded or "high-grade imbecile," and among these, in its most striking form, in the itinerant, ergophobic, and weak-minded tramp, beggar, and petty thief. Constantly in and out of prison, this Munchausen of the highways lives when outside by lying—generally of a romantic character—and minor swindling; while inside, he evades labour, and seeks admission to hospital by malingering of all kinds, from grave self-mutilation and ridiculously futile suicidal attempts, to the simulation of an atypical and incongruous group of mental symptoms.

[1] *Psychische Grenzzustände.* Dr. Carl Pelmann. 1909. Bonn: Friedrich Cohen.
[2] *Die pathologische Auschuldigung.* Dr. Johannes Bresler. 1907. Halle-a.-S.: Carl Marhold.
[3] *Die pathologische Lüge*, etc. Dr. Delbrück. 1891. Stuttgart: Enke.

In the great majority of cases the mere detection of the attempt at deception is a simple matter; as is also in most cases the laying bare of definite mental or moral defect. The difficulty lies in co-relating the constitutional or acquired defects of the *homo noumenon* with the actions of the *homo phenomenon;* that is, in duly apportioning the blame which should be borne by either. Such considerations are still further influenced by the knowledge, gained from experience of other cases of a like nature, that the grotesqueries of the apparently conscious and deliberate malingerer are apt to be followed by a fatal declension into patent and pronounced dementia.

It will be seen, therefore, that a judgement, private or public, upon the vagaries of these people raises the nicest questions as to their responsibility, and, on its medical side, calls for the most refined methods of psychological investigation. Experimental psychology has supplied us with many such methods, and often it is not difficult to demonstrate and even to estimate the presence of defects of voluntary attention, recognition, memorial retention, and, more particularly, of errors of memorial reproduction. The reproduction, for example, of a test scene—say a picture, exhibited under experimental conditions—bears often only a vague resemblance to the original, owing to a notable intrusion of the subjects' fancied recollections, the presence and form of these latter being probably determined by an individual affected bias.

Yet it is not to be denied that at times habitual and confirmed lying and deception of the most flagrant description is to be met with in individuals in whom such methods disclose no trace of intellectual weakness and in whom the diagnosis, for want of a better, is driven back to that of moral imbecility. A remarkable case of this kind was recently described in full and instructive detail by Dr. T. Becker.[4] The subject was a young man who for many years had wandered throughout Germany, living at the public cost in workhouses, hospitals, asylums, and prisons, to which institutions he had secured admission on innumerable occasions by counterfeiting diverse diseases or pretending crime. On the last recorded occasion he had given himself up to the police as having shot Prince Bülow in his palace at Berlin, and was admitted to Professor Sommer's clinic for observation. There he proved himself to be an inexhaustible and romantic liar, glorying in his deceptions, which were recounted with an infinity of detail. Although burdened with a markedly neuropathic heredity, and proving himself to be utterly shameless and devoid of any altruistic feeling, the most minute psychological tests failed to reveal any mental defect, but, on the other hand, a full and accurate memory, sharp perceptions, good intelligence, and exact memorial reproduction. As Dr. Becker and Dr. Bresler both point out in their concluding remarks, no statutory provision is made for such cases, for whom, burdened by innate constitutional defects, punishment appears to be both futile and unwarranted and asylum treatment unsuited. Doubtless in England the comprehensive scheme heralded by the report of the Commission on the Feeble-minded will provide the lifelong supervision and control needed by many. In the meantime, however, the lesson derivable from recorded cases seems to be that, whilst to Satan is ascribed the fatherhood of lies, the fecund mother is ever and always the fertile soil of an inherently defective mental constitution.

[4] Pseudologia phantastica und Simulation. Dr. T. Becker. *Klinik f. psych. u. nerv. Krankh.* 1909. Band iv, Heft 3.

THE ASSOCIATION AND THE MEDICAL DEPARTMENT OF THE TERRITORIAL FORCE.

MEMBERS of the Association connected with the Territorial Force will no doubt have observed that the Council of the Association, at its meeting on October 27th, 1909, appointed a Special Territorial Forces Committee, to which matters affecting the Medical Department of the Territorial Force are referred. The Committee commenced its work by making representations, through the Council of the Association, to the War Office, and to the County Associations, on certain matters which seemed to need attention. The reception of the representations made to the County Associations has been of a most gratifying nature. The two points on which the County Associations were approached were the desirability of officers commanding general hospitals having seats on the County Associations, and the urgent need that proper drill hall accommodation should be provided for the medical units. All the County Associations which have so far replied have expressed their agreement with the spirit if not with the letter, of the recommendations made on the first point. Some explained that the officers commanding the general hospitals in their area were already members of the County Association, others that steps had been or would be taken to make suitable representations to the authorities in favour of the suggestion. A few County Associations explained that while due care had been taken to secure adequate medical representation on the Association, the appointment of each officer commanding a general hospital would in their case have the effect of giving the medical department an altogether disproportionate representation. The answers received in reply to the representation as to the urgent need for suitable drill hall accommodation showed that the County Associations are thoroughly alive to this necessity. Some suggest that, so far as they are concerned, the British Medical Association is forcing an open door, and that they are glad to know that the representations on this subject already made by them to the War Office are backed up by the Association. Welcome evidence of the good work the Territorial Forces Committee can do is the fact that a large number of the County Associations in their replies have expressly welcomed the assistance of the British Medical Association, and have stated they will be glad at any time to receive suggestions on subjects of mutual interest. The committee will welcome any suggestions, or subjects for consideration, sent in by members of the medical department of the Territorial Force.

TRADING ON NAMES.

THE exploitation of famous names for trade purposes is unfortunately too common, and the law is sometimes powerless against this form of fraud. Some years ago a leading obstetrician failed in an attempt to prevent the unwarranted use of his name in an instrument-maker's catalogue. Dr. Huchard, the distinguished Paris physician, is at present striving to dissociate his honoured name from certain pills to which it has been attached by some astute persons in South America. A young London physician, whose scientific work has already brought his name into prominence, has recently paid the penalty of fame by being made the unwilling sponsor of an inhaler; elsewhere we have done our best to set the matter in its true light. It may be said that for ways that are dark and for tricks that are not always vain the vendor of medical and surgical appliances and nostrums is peculiar. Nothing can be more annoying to an honourable doctor than to be made the innocent instrument of a fraud upon the public. It is not every one who can afford to treat this kind of abuse of his name with

the indifference of Sir Astley Cooper. In Bransby Cooper's *Life* of his famous uncle we find the following instructive passage: "It would be tedious to mention the variety of other purposes to which his name was publicly appropriated, without any sanction on his part. Spurious certificates were occasionally brought before the notice of the public, as if under his authority. The vendors of secret medicines did not fail to take the opportunity of connecting his name with some of the articles advertised by them for sale. In these instances, the employers of the deception usually attempted to screen themselves from punishment by substituting the Christian name of Ashley for Astley. Mr. Cooper himself never considered it worth the trouble to take any steps to expose the contrivers of these frauds, but used to observe, 'It is of all things what they most desire, that I should bring an action against them, as it would be the best way of advertising the pretended specifics of these rascals.' If he happened to come into contact with any of these persons he never exhibited *hauteur*, but either ironically inquired about the success of their secret remedies or made some of his usual jocose remarks, as if it were not a matter of sufficient importance for him to allow it to disturb his temper." He goes on to tell the following amusing story: "Mr. Travers mentions to me that on one occasion Mr. Cooper was sent for by Dr. G——, an advertising quack in Shoreditch, whose window announced, in capital letters, 'The Universal Remedy under God.' Before examining the injury my uncle began to banter him, suggesting a trial of the 'Universal Remedy.' 'Come, come, Dr. Cooper,' replied G——, '*this* is a serious affair, *this* is no matter for joking!'" Morrison is the only quack of whom we have heard who showed his belief in his own remedy by taking it to the end.

ST. WINEFRIDE'S WELL.

ST. WINEFRIDE'S WELL, which in the days of Charles II had a great reputation for removing from married women the reproach of barrenness, has in more recent times become famous as a shrine of healing. We learn from the *Liverpool Daily Post and Mercury* of February 26th (for no official report has reached us) that a meeting of the Denbigh and Flint Division of the North Wales Branch was held at Holywell on February 25th. According to our contemporary, the Rev. F. Woodlock, S.J., of Leeds Catholic College, read a paper on Modern Miracles of Healing, the main portion of which was devoted to a description of the cures effected at Lourdes, and the means adopted for the medical examination of the patients, with the view of ascertaining the reality or otherwise of the cures. He explained that his object was to get people to investigate these cures for themselves. If they were found to be genuine miracles, then they must regard them as a Divine interference with the ordinary processes of Nature. The Chairman moved a vote of thanks to Father Woodlock for his paper. He said doctors in their practice met with cases they could not explain, and he believed in miracles yet. Dr. H. W. S. Williams, in seconding, said the cases quoted by Father Woodlock, authenticated as they were, should be some help to them in this matter-of-fact age to recognize the possibility of supernatural interference. Dr. James Williams said, as a man born in Holywell, and one who had lived all his life close to St. Winefride's Well, he had known the spring all his life, and he could not help associating what had occurred at Lourdes with what had taken place at Holywell, which was often called "a second Lourdes." Cures had been reported at Holywell time after time, and he gave particulars of two of them which had come under his own personal notice. He thought it would be a good thing if a register were kept of all the cure at St. Winefride's Well, and if Father Ryan could get the co-operation of the local doctors in the matter it might be possible to do so. We live in a time of miracles, and we agree with Dr. James Williams that the subject is worth investigation. A register of "cures" should certainly be kept, under medical supervision. Such a register is kept at Lourdes, and Dr. Boissarie has published an account of some of the alleged miracles in a large book entitled *Les Grandes Guérisons de Lourdes*. Some of the cases are remarkable as illustrations of the influence of the mind on the body, but the evidence of a miraculous factor in such cases as are given in sufficient detail to enable a scientific inquirer to form a judgement does not seem to us very convincing.

ANTIVACCINATION IN PARLIAMENT.

THE great effort of the members of the late Parliament who were supporters of the antivaccination movement was the presentation in January, 1907, of a members' memorial to the Prime Minister, urging the Government to introduce immediately a short bill "repealing the compulsory clauses (29 and 31) of the Vaccination Act, 1867, and leaving vaccination to be voluntarily provided." What was hoped to be a demonstration of force proved to be an exhibition of weakness. Out of a House consisting of 670 members only 174 signatures were obtained, notwithstanding the energy displayed, and the Government did not introduce the short bill. Of the 174 who signed the memorial 74 are no longer members, 43 having suffered defeat at the polls and 31 having died or retired. Only one division on the question of vaccination took place in the late Parliament. This was occasioned by the Vaccination Act of 1907, an Act which was not regarded as an antivaccination measure, and was not opposed by members who were ardent supporters of vaccination. On the occasion of the second reading little interest was shown, but the antivaccinators made the best show they could in support of a measure which they thought would reduce the number of vaccinations, and when the division was taken on May 24th, 1907, 124 members voted for the second reading. Only 16 members voted against. Of the 124 members just mentioned, only 66 are in the present Parliament. Although lamenting their heavy losses, a curious crumb of comfort has been discovered by the *Vaccination Inquirer*, the antivaccination organ, in its current issue. "Despite this serious diminution in the ranks of our parliamentary forces," it writes, "there is ground for believing that our strength in the new House, when compared with the strength of the Government forces, is relatively greater than it was in the last Parliament." This statement immediately follows the recital of the names of 52 defeated "friends" and the statement that 58 others had either died or retired from Parliament!

THE FINANCES OF THE GENERAL MEDICAL COUNCIL.

THE annual financial statement of the General Medical Council is never a document very easily to be understood, and that issued as an appendix to the minutes of the meeting of the Executive Committee on February 21st is no exception to the rule. The obscurity is entirely due to the fact that whereas the General Medical Council as a whole is the chief spending body, the greater part of the receipts are paid to the English, Scottish, or Irish Branch Councils. During 1909 the sums received by the General Medical Council as a whole amounted to £881, and were derived chiefly from the rent of premises let

off, the registration of forty-five Colonial and foreign medical qualifications, and the sale of the *Medical Register* and other publications. The sale of the *British Pharmacopoeia*, 1898, and the Indian and Colonial Addendum produced £377, but the amount received annually from this source is earmarked as a contribution towards the cost of preparing a new edition; the balance to the credit of the Pharmacopoeia Fund at the end of the year was £1,180. Excluding receipts and expenditures on this account, the total expenditure of the General Medical Council was, in round numbers, £6,916, the deficiency of £6,034 being met by contributions *pro rata* from the English Branch Council (£3,233), the Scottish Branch Council (£2,096), and the Irish (£705). The fees and expenses of members attending meetings of the Council and its Committees amounted to £2,859, and the cost of the visitation and inspection of the examinations of the Apothecaries' Hall, Dublin, was £87; office and miscellaneous expenses, including salaries and wages, and the cost of shorthand reports of penal cases, amounted to £1,227; printing, including that of minutes and programmes, to £609; and law expenses to £340. The printing of the *Medical* and *Students' Registers* for 1909 cost £398, and the sales of the *Medical Register* brought in £72, and of other publications £9. The Branch Councils derive their incomes from registration fees and, in the case of the English and Scottish Branch Councils, from invested funds. The English Branch Council derived £3,181 from the first source, and £883 from the second, but as to the latter amount, £701 was little more than a book-keeping entry, since it represented the interest at 3 per cent. on a mortgage of £24,764 on the Council's premises in Oxford Street. The Scottish Branch Council received £2,518 in registration fees, and £116 in dividends and interest. The Irish Branch Council received £886 in fees, but has no invested funds. The Dental Registration Fund is in a flourishing condition; it has £9,000 invested in Consols and £904 at the bank. During 1909 it received £882 in registration fees, £29 from sale of the *Dentists Register*, and £237 in dividends. The total assets of the General Medical Council, including the funds of the Branch Councils and the Dental Fund, but excluding the Pharmacopoeia Fund, appear to amount to nearly £50,000, but of this one-half is represented by the estimated value of the freehold site and buildings in Oxford Street.

THE COMING CENSUS.

THE bill to authorize a Census of the population of Great Britain in 1911 was introduced in the House of Commons by the President of the Local Government Board and read a first time on March 4th. The bill provides that April 2nd shall be the Census Day. The clauses of the bill differ but slightly from those in the Census (Great Britain) Act, 1900. The particulars required to be inserted in the Census schedules by or on behalf of the occupiers of dwelling houses or tenements are as follows: (*a*) The name, sex, age, profession or occupation, condition as to marriage, relation to head of family, birthplace, and in the case of a person born abroad the nationality of every living person who abode in each house or tenement on the night of the Census Day; and (*b*) whether any person who so abode was blind deaf, dumb, imbecile, or lunatic; and (*c*) in the case of any person who so abode being married, the duration of the marriage, and the number of children born of the marriage; and (*d*) the number of rooms inhabited; and (*e*) in the case of Monmouthshire and Wales, whether any person who so abode (being aged 3 years or upwards) speaks English only, or Welsh only, or both English and Welsh. The only particulars to be inserted in the schedules at next year's Census, which were not required at the last Census in 1901, are those relating to the duration of marriage and the number of children born of the marriage. The inquiry relating to the number of rooms occupied has, however, also been extended; at the Census in 1901 the occupier, *if in occupation of less than five rooms*, was required to state the number of rooms occupied by him; but at the Census in 1911 all occupiers will be required to state the number of rooms they occupy. There is, however, serious ground for regret that the Census Bill has ignored the most important recommendation made by the Census Committee of the Royal Statistical Society in its memorial to the Local Government Board, namely, that the Census Act should include provision for a simple enumeration of the numbers and ages of the population of the United Kingdom in 1916, in order to give increased value to all statistics of which population is the natural and necessary basis. A Quinquennial Census has long been held in France and in Germany, whereas in the United Kingdom a Census has hitherto only been held decennially, with the result that in the last part of each intercensal decennial period the value of the vital statistics prepared and issued by the three Registrars-General are much depreciated, owing to the impossibility of estimating, even with approximate accuracy, the population of administrative areas, and more especially of rapidly growing urban districts. The importance of thoroughly trustworthy vital statistics in the promotion of health progress can scarcely be over-estimated, and we may still venture to hope that this serious deficiency in the Census Bill may be rectified by amendment in Committee. The Society of Medical Officers of Health is naturally in full sympathy with the Royal Statistical Society in its endeavour to secure statutory provision for a quinquennial enumeration of population, recognizing the present difficulty of estimating the population of administrative areas, and of their component parts, during a ten-year intercensal period. Trustworthy statistics of population are as essential for effective local administration as for national purposes connected with public health, education, and other matters on which the social welfare of the nation depends. It may, therefore, be hoped that medical officers of health will be able to obtain the support of their sanitary authorities in an endeavour to secure Parliamentary support for the amendment of the Census Bill in this respect. The County Councils Association might be able to render valuable assistance in this attempt to obtain provision for an intermediate simple enumeration of population in 1916.

THE ORAL TEACHING OF THE DEAF.

IT is often remarked that deaf persons taught to speak by the oral method are apt to enunciate their sentences in a dead level of monotone. That it is possible to impart to them some degree of modulation of the voice, and even of expression, was the object of a demonstration given last week in London by Mrs. Nina White, of Ipswich. She stated that her system was founded on the fact that by mental concept alone can a stone-deaf child appreciate the difference between modulations on the musical scale, and thus gain control over inflections of the voice. She was accompanied by a girl pupil who, as we understood from Mrs. White, was completely and congenitally deaf, and who, after receiving oral instruction at a well-known school for the deaf, had come under her own special training. By a series of exercises in diaphragmatic breathing, in vocalization, and more especially in the expression of emotion, the pupil had attained a considerable

power, not only of correct phrasing, but of accent, emphasis, and variation in the pitch of her voice. This result had been brought about by certain exercises which Mrs. White claims as her own, though similar ones seem to have been practised also by some Continental teachers, such as Signor Fausto Columbo of Milan and Professor A. L. Hettich of Paris, whereby motor or kinaesthetic impressions are translated into mental concepts, enabling the pupil to form an idea of the modifications necessary correctly to express interrogation, emphasis, surprise, etc. Thus, to convey notions of interrogation, the pupil's attention is directed upwards, of emphasis downwards (with the aid of a bouncing ball), and so on. The girl who was the subject of the demonstration seemed to us (for a congenitally deaf case) exceptionally intelligent and responsive, and no doubt by frequent repetition had become remarkably smart in her exercises. How far the system may be universally applicable is a matter on which we cannot express an opinion, but we have no doubt experts in oral teaching will seriously consider the possibilities of applying Mrs. White's methods in improving the voice modulations and inflexion of their pupils.

FINANCIAL POSITION OF BRITISH WORKMEN.

AT intervals during the last two years the Board of Trade has issued reports on the cost of living to the working classes in the United Kingdom, in German and in French towns. The series has recently been supplemented by a report[1] on the working-class rents, housing, and retail prices, together with rates of wages in the principal industrial towns in Belgium. The earlier part of the report contains comparisons of the Belgian towns among themselves, while in the second part an attempt is made by the compiler, Mr. G. R. Askwith, to compare the results with those previously obtained for England and Wales, in regard to rents and prices, and the wages in certain occupations in the building, engineering, and printing trades, which are practically identical in character in both countries. In the comparison of rents a certain amount of uncertainty is introduced by the fact that the workman in Belgium is almost exempt from local taxation. Mr. Askwith estimates that, excluding that portion of English rents which represents local taxation, the net rent of working-class dwellings in Belgium was, at the date taken, to the net rent of working-class dwellings in England as 74 to 100, and that the cost of the average British working man's weekly purchases of certain standard articles of food and fuel, for an average family at the prices ruling in Belgium, was, to the cost of the same articles at English prices, as 99 to 100. The expenditure of the average British working man with an average family on certain standard articles of food and fuel, and on rent, at the prices and rents ruling in Belgium, would be, it is estimated, to his expenditure on the same items, together with local taxation at the prices and rents ruling in England, as 91 to 100, or excluding local taxation, as 94 to 100. It would appear, therefore, that an English working man living in Belgium and maintaining as far as possible his English mode of life and his English dietary, would find his expenditure on food, fuel, house room, and local taxation, reduced by about 9 per cent. His earning capacity, however, would be reduced in a much greater degree, for the weekly money wages of the working classes in Belgian towns in the widely distributed trades selected for comparison were, to those of the same classes in England, as 63 to 100, whereas the average usual working hours a week were as 121 to 100, so that the hourly rates of money wages for the working classes in Belgium were to those of the same classes in English towns approximately as 52 to 100. The validity of the comparison is limited by the fact that the wages and hours of labour which it was found possible to compare were those of various sections of the building and engineering trades, and one section of the printing trade alone. The comparison of prices is made from the standpoint of the British artisan's ordinary diet, and not from that of the Belgian artisan; and the estimates are not intended to be estimates of the relative well-being of the working classes in the two countries, but only of two important factors, the money earnings of labour during equal times in each country, and the cost in each of some standard quantities of food, fuel, and house room, the standard chosen being that of the British artisan.

[1] Cd. 5,065.

ACADEMIC DRESS AT THE ANNUAL MEETING.

THE Executive Committee of the Annual Meeting in London next July has resolved to request members to wear academic dress or uniform on the three following occasions: on Tuesday evening, July 26th, at the Presidential Address; on Wednesday afternoon at the Church Service in Westminster Abbey; and on Wednesday evening at the Conversazione which will be given in the Guildhall by the Lord Mayor and Corporation of London.

MECHANO-THERAPEUTICS.

ON several occasions recently reference has been made to the value in the treatment of certain forms of disease of the Zander machines when used under proper supervision in an adequately appointed institute. We learn that a Zander institute was opened in Bath in 1904 by the present directress, Miss Allen, who had obtained experience in the treatment mainly at the Berlin Medico-Mechanical Institute. The Bath institute does not contain the motor actuated machines for vibration, etc., as they were considered hardly necessary for use in association with treatment by baths and waters, an association which has always been kept in view. There is a complete installation of all the machines required for active or passive weight-resisted movements of the trunk, neck, and limbs. In the same building there is a well-equipped general gymnasium with the usual apparatus for orthopaedic treatment of spinal and other troubles. We are informed by a physician who holds a leading position in Bath that the institute has always been conducted on the strictest ethical lines, and that, apart from the general gymnastic classes, no patients are received for treatment except under the direction of their medical advisers. Miss Allen, he adds, was formerly assistant gymnastic mistress and game mistress at the Cheltenham Ladies' College, and comes of a family which has distinguished itself in games, especially in football. The paragraphs previously published have brought us the further information that though there is no Zander institute in Liverpool, several joint exercise machines of a modified Zander pattern have been included in the equipment of the department of orthopaedics and massage at the David Lewis Northern Hospital. Dr. W. H. Broad, who is the surgeon in charge of this department, states that since its establishment five years ago 984 cases, involving 7,763 attendances, have been treated, and that, as a matter of routine, all cases of joint stiffness resulting from fracture, dislocation, or other injury are sent as early as possible for systematic treatment. He considers that in these particular cases the machines are extremely useful,

since they can be arranged not only for preliminary passive movement, but afterwards adjusted for active muscular exercise. The period of incapacity from work following accidents of the nature mentioned is materially diminished, and Dr. Broad believes that if all such cases were undertaken early and aggressively there would be a marked diminution in the number of neglected fibrous adhesions upon which bonesetters' successes are mainly founded.

THE Town Council of Preston has conferred on Dr. R. C. Brown the honorary freedom of the borough in recognition of his munificent gifts to the Preston Infirmary and other local charities. Dr. Brown's beneficence has not been confined to the town in which he was born and in which he has spent his life, for some time ago he presented an *x*-ray apparatus and other instruments to Cambridge University, besides founding a scholarship for pathological research on special diseases.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

The Colonial Vote and Sleeping Sickness.—On the Supplementary Estimate last week an interesting medical debate arose on the proposed grant of £1,000 to the Sleeping Sickness Committee of Investigation. Sir William Collins called attention to the modest sum put down in the Estimate as a new departure of a praiseworthy kind. He inquired whether the proposed pathological researches would embrace diseases of animals as well as those of men. He instanced the case of African horse fever, and further inquired as to whether the University of Liverpool, with its School of Tropical Medicine, and the London University and the Royal Society would have some share in administering the grant. He suggested that men of broad philosophic views, and not bacteriologists exclusively, should be employed on the task. After some remarks from Mr. J. A. Grant on the ravages of sleeping sickness, Mr. Churchill, who was in charge of the vote, said he agreed that it was of immense importance to deal with sleeping sickness by all the means in our power. After describing the preventive steps taken in Uganda and admitting that the statistics of mortality had not declined to any marked degree and could not at present, he said the infected were being isolated and the population moved from them. He understood that the committee over which Lord Cromer presided was entirely independent of the two schools of tropical medicine, both of which received grants from the Colonial vote. This was purely a committee of research. A vote of £1,000 per year was proposed to be given to it, and later on there would come another £1,000 from some of the African colonies. The committee would send two very skilled investigators—one to the East Coast and the other to the West Coast—to advise and report on any special points on which it might desire information. The inquiry covered the whole region of the diseases which were conveyed by insects, not only those which affected man, but those which affected animals and plants. Mr. George Greenwood asked whether this money was to be devoted in part to vivisectional research. A series of experiments in regard to sleeping sickness had been carried out by Dr. Andrew Balfour, which involved an enormous amount of suffering to dogs and other animals. No benefit to science, and certainly none to humanity, had been gained in this particular case, and before the money was voted he wanted to know whether it would be used for vivisectional purposes. Mr. Churchill said he did not apprehend that it was intended to use the money for the purposes feared. The methods of research of the Committee would probably be more of a theoretic nature than in the nature of experiments of the kind which Mr. Greenwood disliked so much. He could not possibly make any pledge on this subject which should keep them off from any line of inquiry which they might think it advisable to have, but if they were to embark upon any such experiments, then the matter would come back to him in his capacity as Home Secretary in watching over the working of the Vivisection Act, and he should certainly be guided by a desire to minimize, so far as possible, the sufferings of dumb animals, while at the same time making sure that the advance of science was not impeded. Dr. Addison followed, and said that he was pleased that the hands of the Committee would not be tied, while needless cruelties were checked. He thought the statements made by Mr. Greenwood would not altogether bear close investigation, because sometimes experiments could be carried on for a long time without apparently any hope of successful results, and yet eventually be rewarded by great success. The striking thing about this Vote was the smallness of it. He supposed it would not be fair to compare it with the Vote which preceded it, but it was a striking feature of the British character that here we devote £1,000 to tropical research and £200,000 to policing Somaliland. He would respectfully urge that if we had spent another £199,000 in research in reference to tropical diseases, we should have done very much more to consolidate and expand the British Empire. After referring to the successful work in regard to research done by Americans while constructing the Panama canal, he pointed out the great value of the work the Committee would do in co-ordinating and collecting the results attained in various parts of the world. The vote was agreed to without a division.

The Census of 1911.—The bill for taking the Census next year was presented on Friday last, and is backed by Mr. Burns, Mr. Herbert Lewis, and the Lord Advocate. It fixes Sunday, April 2nd, 1911, as the Census day, and the work will be carried on under the superintendence of the Local Government Board. The bill is framed on the lines of the last Act, but Clause 4, which deals with the preparation and filling up of the schedules, introduces two new requirements in calling for information in case of a married person, as to the duration of marriage, and the number of children born of the marriage. In addition, the number of rooms occupied is to be given in the case of every family, instead of limiting it as formerly to those who occupied less than five rooms. There will be some 40,000 persons employed as enumerators, who will deliver the Census papers a day or two before the appointed day and collect them afterwards. The collection is the difficult task, and the enumerator is not overpaid by his retaining fee of 21s. and 7s. 6d. for every hundred names recorded. The bill when discussed in Committee may be slightly amended.

Poor Laws (Royal Commission).—Mr. Henry Walker asked the Financial Secretary to the Treasury whether the Royal Commission on the Poor Laws and Relief of Distress had held any sitting for twelve months; whether it had long since presented all the Reports required of it; whether it was still in occupation of offices of considerable value, thereby involving other Commissions in expense in hiring accommodation; whether about twenty out of fifty volumes of its evidence, etc., had still to be published, although these volumes had been in type for more than a year; how many clerks and other officials connected with this Commission were still being paid from public funds, and under what supervision they were now working; and whether he could state when the offices would be vacated, when the remaining volumes of evidence, etc., would be published, and when the payments on behalf of this very costly Royal Commission would be brought to an end. Mr. Hobhouse replied that the last meeting of the Commission was held on July 20th, 1909. The existing staff of the Commission consisted of a senior clerk

and two assistant clerks, who performed their work under the supervision of the secretary and subject to the general control of the chairman. Of the eleven rooms originally occupied by the Commission at Scotland House only two and a store room were now being used by the Commission's staff; the remaining eight rooms had been handed over to other Commissions. Since the issue of the English Report in February, 1909, the staff had issued the Commission's separate Report on Ireland, the Commission's separate Report on Scotland (November, 1909), and twenty-seven separate appendix volumes of evidence, reports by special investigators, etc. In all during the year ended March 4th, 1910, the staff of the Commission had been responsible for editing and issuing twenty-nine separate volumes, containing over 10,300 folio pages of printed matter. There remained to be issued a consolidated index of the English Reports and evidence and twenty-three other volumes of evidence, special reports, etc. Although a few of these volumes had been in type in an incomplete form for some time, the majority were in a very unfinished state, and required careful editing before publication. Among the volumes still to be issued were those relating to foreign poor relief systems and to the large mass of special statistics collected by the Commission. It was anticipated that the work of the Commission's staff would be completed in the autumn.

The Society of Apothecaries Bill was brought before the House last week by Mr. Speaker, who said on the order for the second reading that the Bill was one which sought to empower the Society of Apothecaries of London to grant diplomas in sanitary science, public health, State medicine, school hygiene, and tropical medicine, and also for dentistry and dental surgery, and for that purpose to hold examinations. He had considered the matter very carefully, and he had come to the conclusion that this was a bill which ought not to proceed as a private bill, but must proceed as a public bill, as it dealt with public interests; thereupon the order was discharged and the bill withdrawn.

The Mortality of Infants under the Poor Law.—Last week Mr. Wedgwood asked whether the President of the Local Government Board could take steps to obtain the information as to the rate of mortality in Poor Law institutions of children between the age of 2 and 5 years, and the rate of mortality under 1 year of age of infants being maintained on outdoor relief, the absence of which was noted and regretted in the Reports of the Poor Law Commission. Mr. Burns said that the whole question of obtaining more and better statistics on Poor Law matters was receiving attention, but he was not yet in a position to give particulars as to the figures which would be collected with a view to meeting the suggestions of the Royal Commission. He might mention that an inquiry was now being undertaken by Dr. Darwall Smith, on behalf of the department, as to the causes of mortality among new-born babies.

Lunacy Act, 1890 (Fowler v. Grant).—Mr. Pickersgill asked the Secretary of State for the Home Department whether he had now inquired into the circumstances disclosed in the action of Fowler *v.* Grant, tried at the Manchester Assizes a fortnight ago, in which it appeared that a person now admitted to have been perfectly sane was committed to a lunatic asylum, and there treated as a lunatic for upwards of a year; and especially to the observations of Mr. Justice Walton that a man or woman, not a pauper, might be taken to the workhouse, shut up in an imbecile ward, and then declared to be a lunatic and placed in a lunatic asylum, without any public inquiry, any hearing before a magistrate, or any notice of what was going on; and whether he would consider the advisability of making inquiry by means of a Select Committee or otherwise, into the working of the Lunacy Act, 1890. The Under-Secretary for the Home Department said that the Secretary of State had seen reports of the case, and had made inquiry. He was advised by the Lunacy Commissioners that the procedure in connexion with the plaintiff's removal to an asylum was regular throughout. The action was settled by an agreement between the private parties, on which he could express no opinion; but he might say that he agreed with the Commissioners in Lunacy that when there was opportunity for legislation Section 13 of the Lunacy Act, 1890, should be amended, so that a patient admitted under that section should have the same right to see a justice after admission as was conferred upon a private patient under Section 8.

Military Assistant Surgeons in India.—In answer to Mr. Hazleton last week, Mr. Montagu said that the medical diploma held to be sufficient for military assistant surgeons in India was not in all cases sufficient to enable the holder to be registered under the Medical Acts in this country. In reference to the Senior Assistant Professor at the Medical College and the Senior Assistant Surgeon at the General Hospital, Madras, Mr. Montagu referred his questioner to the reply given on October 21st last year, and added that the Government of Madras had doubtless satisfied themselves that the holders of the posts possessed the qualifications necessary to enable them to fill them. Mr. Hazleton then asked whether the attention of the Secretary of State had been called to a resolution unanimously adopted at a meeting of members of the medical profession, held under the auspices of the Bombay Medical Union, submitting that the present system of reserving all important posts in the medical service of India for military officers of the Indian Medical Service had led to the entire exclusion from these posts of Indian civil doctors, however high their qualifications; whether he was aware that the present system caused much discontent and was the occasion of unnecessary expense; and whether he could hold out any hope of early reform. Mr. Montagu replied that the Secretary of State had not seen the resolution referred to. From answers given to previous questions and from the papers presented to Parliament last year, the hon. member was aware that action had been taken with a view to increasing the number of Government medical appointments held by unofficial doctors in India. The process must inevitably be a slow one; and the Secretary of State was not in a position to make any further statement at present.

Alcoholic Insanity (Straits Settlements).—Mr. Rees asked whether the report of the superintendent of the Straits Settlements Lunatic Asylum showed that the substitution of cheap brandy for opium was leading to a rapid development of alcoholic insanity amongst the Chinese. The Parliamentary Secretary to the Treasury replied that the report referred to stated that alcoholic insanity among the Chinese was increasing, but the statement was scarcely borne out by the figures, which showed that in 1908, the year to which the report related, 14 persons were admitted to the asylum suffering from alcoholic insanity, as against 16 in 1907. The superintendent referred to several cases in which insanity was the result of over-indulgence in cheap brandy, but there was nothing to suggest that this liquor was used as a substitute for opium.

Parochial Medical Officers (Scotland) Bill.—Mr. Cathcart Wason introduced on Monday last his bill to amend the law relating to the tenure of office of parochial medical officers in Scotland. The bill was put down for second reading on March 14th.

The Public Health (Provisional Orders) Bill was presented by Mr. George Thorne and read a first time last week, and the second reading put down for March 14th. The object of the measure is to amend the Public Health Act, 1875, in relation to provisional orders.

Scotland.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

STATE REGISTRATION OF NURSES.

LORD INVERCLYDE, the President, occupied the chair at a meeting of the Association for the Promotion of the Registration of Nurses in Scotland, held in Edinburgh on March 3rd. There was a large attendance of members. On the platform were the President of the Royal College of Physicians (Dr. Allan Jamieson), Dr. Affleck, Dr. R. McKenzie Johnston, Sir Alexander Simpson, Dr. Playfair, and Dr. D. T. Macintosh (the Secretary).

Lord Inverclyde traced the origin of the association, the objects of which were to promote a system of registration of nurses, to protect the interests of Scottish nurses, and to secure for Scotland such treatment as would enable it to obtain the fullest possible benefit from registration. He had been in communication with Lord Ampthill, who had piloted through the House of Lords a bill which was not acceptable to them. Lord Ampthill welcomed his suggestions, several conferences had been held with satisfactory results, and a draft bill had been agreed on. The bill had been introduced into the House of Commons by Mr. Munro Ferguson, though there seemed little prospect of any progress being made with it.

Dr. D. J. Mackintosh gave an account of the proceedings of the association during the past year. It had been early recognized that a single register for the three divisions of the kingdom was not only desirable, but would be mutually advantageous, providing certain concessions were made to Scotland. The Executive Committee was composed of the matrons and superintendents, as well as representatives from the staffs and boards of management, and nurses of practically all the chief hospitals of Scotland. The association now had 1,785 nurse members. Representatives of the association attended, in January last, a conference in London, on the invitation of Lord Ampthill. The delegates to that conference were instructed to agree generally to the following principles, but had power to modify the same in regard to details:

> To promote a system of registration of nurses; to protect the interests of Scottish nurses; although there might be one national register for the United Kingdom and one standard of examinations, there must be a separate Scottish executive council responsible for the entire administration so far as Scottish nurses were concerned; while, subject to the approval of the central council, the following matters in connexion with the register which apply to Scotland should be under the management and control of the Scottish executive council—namely, the minimum period of training of nurses, the recognition of institutions for training, and the conduct of examinations of nurses for purposes of registration. It was to be understood that the Scottish training schools were to be represented on the proposed council, and that two guineas should be the maximum fee permissible for registration. The question of representation was also one of the most important with which the delegates had to deal, and it was resolved that on the provisional council there should be one past or present matron of a Scottish hospital or infirmary, one nurse to be appointed by the association, and one nurse to be appointed by the Scottish Nurses' Association.

Had it not been for the efforts put forward by that association, Scottish nurses might have found themselves left out in the cold in the proposed legislation.

Dr. Allan Jamieson moved, and Dr. John Playfair seconded, a resolution approving of the action of the executive during the past year, including the action of the delegates to the various conferences in London.

Dr. R. McKenzie Johnston moved, and Sir Alexander Simpson seconded:

> That it be remitted to the Executive Committee to watch the progress of the United Bill with a view to safeguarding the interests of Scottish nurses, and to secure that the Scottish Divisional Committee provided for in the Bill be of an adequately representative character.

Miss Gill moved, and Miss Thomas seconded:

> That this Association is of opinion that State registration would be to the advantage of nurses in general, and urges upon nurses the desirability of joining this Association.

All three motions were adopted.

The annual meeting was held in Glasgow on March 2nd. Lord Inverclyde presided, and Dr. Mackintosh made the same statement as at the meeting in Edinburgh. The first resolution was moved by Sir Hector Cameron, and seconded by Sir George Beatson, the second by Professor Glaister, and the third by Miss Gill and Miss Paterson. Dr. J. M'Cubbin Johnston, honorary treasurer, reported that the subscriptions amounted to £117 2s. 8d., and the expenditure to £155 16s. Dr. Renton, in moving the adoption of the report, expressed the opinion that an effort should be made to raise more money if it was hoped to carry the measure into law. The report was adopted, on the motion of Mr. J. D. Hedderwick.

THE GREAT COLD IN SCOTLAND.

A paper was communicated by Mr. Ralph Richardson at a meeting of the Scottish Meteorological Society on February 25th on the occurrence of great cold throughout Scotland during November and December, 1909, and January, 1910. Considering only records from thermometers exposed in Stevenson screens, it was recalled that exceptionally cold weather had been experienced at the end of October, whilst during the three following months there had been four periods of very acute cold. In November the weather conditions during the third and part of the fourth week were altogether abnormal, a reading of only 3 degrees above zero being recorded at Balmoral on November 18th, and the Royal Caledonian Curling Club, founded in 1847, had, for the first time in its history, been able to play the North *v.* South match during November. In December two cold periods occurred, from the 6th to 9th and from the 19th to 22nd, with a zero reading at Balmoral on December 7th. January opened with very mild weather, which was in extraordinary contrast to the great cold experienced towards the end of the month, when readings as low as 10° below zero occurred at Balmoral and Logiecoldstone on the night of January 27th to 28th. Slightly lower readings were experienced in January, 1881, but with that exception the records were the lowest for that month since observations were organized in 1856.

THE "OPEN SPACES" SCHEME IN EDINBURGH.

A subsidiary and unofficial scheme in connexion with the general public health movement in Edinburgh has for the last season or two been carried on by the Open Spaces Committee of the Outlook Tower Association. This committee is engaged in reclaiming the areas of waste ground which exist in considerable numbers, hidden away among the courts and closes of the Old Town, and turning them into gardens. The hygienic value to the slum dwellers of such a movement is obvious, but it also has an aesthetic aspect and an uplifting moral effect difficult to over-estimate. The children of the adjacent districts are being attracted away from the debasing atmosphere of the streets, and are being instructed in gardening by competent teachers. The results on the physique, manners, and general outlook on life of those children who have had a season of the work are already quite noticeable. The committee, which includes several well-known members of the medical and teaching professions in Edinburgh, usually proceeds on the system of acquiring these derelict areas by lease, having them laid out by its official gardeners, and then handing them over, under certain reservations, to the care of competent local bodies, such as schools, associations of boy scouts, or the like. Scattered areas representing a total of as much as 10 acres of suitable ground exist along the dorsal ridge of the Old Town, and it is hoped to acquire most of these as soon as funds and opportunity permit.

GLASGOW TRAMWAYS EMPLOYEES AND THEIR DOCTORS.

The Glasgow Corporation Tramways Friendly Society adopted a resolution so altering the rules relative to the appointment of medical officers as to place the appointment and dismissal of the medical officers in the hands of the members of each branch instead of in the hands of the committee of management. The

matter came before the Tramways Committee of the Corporation, and it was remitted to a subcommittee, which has reported against the proposal; the parent committee adopted the report by 13 votes to 4. The appointment and dismissal of the district medical officers will therefore remain with the committee of management—a much more satisfactory arrangement from the medical officers' point of view, and more likely to secure fixity of tenure than the proposed alteration.

GLASGOW HOSPITAL SUNDAY FUND.

The annual meeting of subscribers to this fund was held last week. The report submitted showed that the total sum collected from the churches and Sunday schools contributing to the fund was £4,648 17s. 6d., of which £4,430 was available for distribution among the three general hospitals. The money is allocated in proportion to the number of beds fully occupied, and the Royal Infirmary receives £1,895 6s. 9d., the Western Infirmary £1,737 18s., and the Victoria Infirmary £796 15s. 3d. It was stated that the fund has during the seventeen years of its existence contributed over £76,350 to the infirmaries. That the amount contributed in the past year was about £328 less than in 1908 was probably in large measure due to the general dullness of trade, but in part also to the fact that Hospital Sunday proved to be a very wet day. The collection for the hospitals is made on the last Sunday in November, and this date was also adopted for the year 1910, though some of those present suggested that another date could be found more suitable to the working classes who contribute largely to the hospital funds.

CARE OF DEFECTIVE CHILDREN IN GLASGOW.

The annual meeting of the Glasgow Association for the Care of Defective Children was held on February 24th, Sir Samuel Chisholm presiding. The report showed that the work during the year had been very satisfactory. The total number of children in the home was 33, and these had benefited to a remarkable extent, both mentally and physically, from the care and training received.

EDINBURGH I.M.S. DINNER.

The annual Indian Medical Service dinner will be held, as formerly, in the United Service Club, Shandwick Place, Edinburgh, on Friday, May 27th, at 7 p.m. Sir Alexander Christison, Bart., will be in the chair. We are requested to give this timely notice so as to reach officers, in India and elsewhere, who may contemplate coming home on furlough. Arrangements are, as usual, being carried out by Colonel Arnott, 8, Rothesay Place, Edinburgh, who will be glad to hear from those wishing to be present.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

POOR LAW REFORM.

POOR LAW reform in Ireland was the principal subject discussed at the annual meeting of the Philanthropic Reform Association held in Dublin on March 4th, and as the subject is now being generally discussed and is likely to attract even more attention if Mr. Kerr-Smiley's bill comes before the House of Commons, the conclusions arrived at by the committee of the association deserve consideration. These conclusions have been arrived at after much study of the subject, including the reports issued by the Government Commissions, and may be summarized as follows:

1. That the inmates at present in union workhouses should be placed in special institutions for each class maintained in each county, and be paid for out of the county rate—the sick in hospitals, the aged and the infirm in almshouses, the mentally defective in asylums.
2. That sane epileptics should be cared for in special homes, and that in the absence of such a home the Government should make a substantial contribution towards the maintenance of such epileptics in workhouses.
3. The best policy in dealing with inebriates in reformatories was to commit them for longer periods after each failure to keep sober.
4. That the able-bodied who require maintenance in institutions should be placed—the well-conducted in labour colonies and the ill-conducted in detention colonies.
5. That children should be boarded out as far as possible.
6. That the county councils, enlarged and extended to include women, should be responsible for expenditure and for the control of all institutions, and that in addition local committees should be established in each union.

DUTIES OF SANITARY AUTHORITIES.

A couple of weeks ago we called attention to the difficulty experienced in some parts of Ireland in stimulating the local authorities to attend to the sanitation of their districts. This week we have to record the resignation of the medical officer of health of Castlebar District No. 2 as a protest against the neglect of the sanitary authority to discharge their duty. Dr. C. J. Vahey, the officer in question, states in reference to the insanitary condition of a well in his district, that he has reported on the same *ad nauseam*, but has received no assistance from the members of the Castlebar District Council. Dr. Vahey's resignation was received, but it is hoped that the matter will not end here, and that his public-spirited action will lead to a full inquiry into the conditions of which he complains.

SKIBBEREEN BOARD OF GUARDIANS AND MEDICAL OFFICERSHIP.

At a largely attended meeting of the Skibbereen Board of Guardians on February 28th, most noisy scenes occurred in connexion with the appointment of the medical officer for the workhouse. The Local Government Board had sanctioned the appointment of Dr. O'Meara as senior medical officer, and he had already entered on duty; but as the appointment of Dr. Burke was a new appointment, or, rather, the appointment of a second doctor was a new departure of which notice had not been formally given, the Local Government Board refused to sanction the second appointment until this had been done. After prolonged discussion, the Board decided, in consequence of legal opinions it had received, to regard the election of Drs. O'Meara and Burke conjointly to the medical officership to the union workhouse, made on January 19th, and approved in respect of Dr. O'Meara by the Local Government Board, as null and void, and to hold a fresh election on March 12th of a medical officer to the workhouse, at a salary of £80 a year, rising to £120 by triennial increments. Meanwhile Dr. Walsh was requested to continue to do duty as medical officer, and Dr. O'Meara was warned not to enter the workhouse.

VETERINARY MEDICAL ASSOCIATION OF IRELAND.

The most important part of the report presented to the recent annual meeting of the Veterinary Medical Association of Ireland dealt with the efforts that had been made in connexion with a scheme proposed for the reconstitution of the National Veterinary Association and union of the various veterinary societies. The general feeling of the members of the association was in favour of appointing an executive council representative of the various associations in Great Britain and Ireland for the protection and promotion of all veterinary interests. The council would be called the Council of the Veterinary Medical Association of Great Britain and Ireland, and rules had been drawn up as a working basis.

At the annual dinner the president of the association, Mr. John Holland, who was in the chair, proposed the toast of "The Guests," coupled with the names of Sir Christopher Nixon, Sir Charles Cameron, and Professor Theiler. He spoke in enthusiastic terms of the aid in the establishment of the Veterinary College afforded by the two first-named gentlemen. The diploma of honorary membership of the association was then handed to Sir Christopher Nixon and to Sir Charles Cameron, and Sir Christopher Nixon, in replying, referred to the importance of a veterinary college in a country which was mainly agricultural. He also alluded to the intimate connexion between human and veterinary

medicine, a connexion so marked that the celebrated Talleyrand at one time introduced a bill into the French Assembly which required that students of human medicine should first devote a certain number of years to veterinary medicine. Sir Charles Cameron, who also replied, spoke of an attempt which he had made nearly fifty years ago to found a veterinary college by private enterprise. Later the toasts of "The President" and of "The Veterinary Medical Association of Ireland" were proposed and suitably acknowledged.

England and Wales.

[*FROM OUR SPECIAL CORRESPONDENTS.*]

LEEDS.

THE GENERAL INFIRMARY.

THE statistical tables prepared in the general manager's office of the number of patients treated in the different departments during the year ending December 31st, 1909, together with certain details about these, will prove of interest to those who are concerned in hospital management. In the total number of in-patients there was an increase from 7,137 to 7,357. It was certainly thought that a limit to the number of patients passing through the wards without some increase in the number of beds was reached last year, but here there is seen to be an increase of 220. The cases in the medical wards were 1,146 as against 1,240 in 1908, a diminution of 94, so that the increase was in the general surgical and special departments, all of which show an increase with the exception of the gynaecological department, in which the number of patients has fallen by 25. It is felt—certainly by the physicians—that the length of time spent by patients in the wards might with benefit be increased, and there is no doubt that many more patients suffering from medical illnesses would be admitted if accommodation permitted. The average number of patients in the infirmary was 375, as against 365 in 1908; the average stay in the infirmary was 18.6 days as against 18.7. The deaths amounted to 505, as against 531 for the previous year. This gives a percentage mortality of 6.8, or if those dying within forty-eight hours of admission are deducted—of which there were 159—the percentage works out at 4.7. The out-patient departments show an increase in the amount of work accomplished. The total number of new cases amounted to 48,451, as against 42,371 for 1908. There were 511 maternity cases in the extern department. From the wards there were sent to the Robert Arthington and the Ida Convalescent Hospitals 1,038 patients, a somewhat smaller number than in 1908. On the other hand, there was a great increase in the number of patients sent from the infirmary to other convalescent hospitals, this amounting to 254, as against 177 for 1908. Comment has been formerly made in this paragraph to the remarkably small amount of stimulant used at the infirmary. This is probably general all over the kingdom. The total amount of wine and spirits used in all departments of the infirmary during the year 1909 was 4,191 oz., about one-thirtieth of an ounce per patient per day.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

In the JOURNAL of March 13th, 1909, the steps which had been taken by the Leeds Education Committee for the medical inspection of school children were commented on, and in some respects criticized unfavourably. It will be remembered that twenty medical men were appointed at a remuneration of £1 1s. for each group of thirty examinations. When the full examination very properly expected is remembered, this remuneration must be regarded as absurdly low. Dr. Wear was one of those appointed, and he was placed in the position of senior. Dr. Wear, who has shown the greatest possible interest in the work, has now been appointed whole-time medical officer to the Education Committee. He gives up his private practice and will receive a salary of £650. This appears to be a step in the right direction. The number of part-time medical officers will be reduced to sixteen, the remuneration remaining at the same inadequate figure as formerly.

THE WORKPEOPLE'S HOSPITAL FUND.

The twenty-third annual meeting of the subscribers to this fund was held on February 23rd, under the chairmanship of Mr. F. R. Shark, the chairman, the originator, and the life, one may say, of the association. Another year's work was reported on, and afforded further evidence of the great success which has attended the efforts of all those associated with the movement. While on the one hand there had been some falling off in the amounts received from the workpeople of some of the firms, the report stated that the deficiencies had been made up by subscriptions from newly-established workshops in the city. The total income for 1909 amounted to £13,084. The largest and most steady amount was from the weekly payments of the workpeople (£9,882). Collections in public houses brought in £576; dramatic performances and football matches, £195; ward carnivals, £203; Sunday concerts, £175; club collections, £143; and school collections, £118. The expenditure amounted to £4,200. This sum, it must be borne in mind, was devoted in large measure to the maintenance of the two convalescent hospitals. The grants made to the various charities were as follows: General Infirmary, £5,250; Leeds Public Dispensary, £800; Hospital for Women and Children, £800; Tuberculosis Association, £315; Leeds District Nursing Association, £250; Leeds Maternity Hospital, £125; Bramley and Stanningley District Nursing Associations, £50 each; Leeds Homoeopathic Dispensary, £15. As special donations, £250 was given to the building fund of the new Maternity Hospital and £50 to the Convalescent Camp for Poor Children at Arnside.

LIVERPOOL.

THE ROYAL COUNTRY HOSPITAL FOR CHILDREN AT HESWALL.

THIS institution, founded eleven years ago for the treatment of children suffering from chronic diseases necessitating a long sojourn in hospital, has been well supported, and has steadily enlarged its operations. At the annual meeting, just held, the committee announced that the new buildings at Heswall have been opened, and sixty children duly installed. Other wards are in course of construction, and of these two are nearly completed. These two wards will present a novel feature in the respect that they will have only three walls, the whole of the fourth side being open to the air. The inmates will thus live and sleep practically out of doors. A small sum is charged in the case of most of the children, but it is not sufficient to cover the cost of maintenance, and, as the result of last year's working, there is a deficiency of £900. In view of the long sojourn of the children in the institution, negotiations have been opened with the Liverpool Education Committee for the establishment of a special school in connexion with it, and there are good grounds for hoping that some satisfactory arrangements will be made by which the time spent in undergoing treatment will not be altogether wasted as regards education. The King has shown his interest and appreciation of the work done by the institution by authorizing it to use the designation of "Royal," and it will be known henceforth as the Royal Liverpool Country Hospital for Children.

MANCHESTER AND DISTRICT.

THE MANCHESTER AND SALFORD HOSPITAL SUNDAY FUND.

IN the annual appeal for the Hospital Sunday Fund it is stated that the total expenditure for medical treatment of the sick poor by the charitable hospitals of Manchester and Salford in the year 1909 was £114,056, and that after including the income from

the Fund the charities showed an aggregate deficit of £9,500. This deficiency will probably be much larger during the present year, as the annual report of the Manchester Royal Infirmary alone shows a deficit of about £8,000, and after taking into account the additional expenditure for cleaning, renewals, and other matters, which will probably amount to £1,000 or £1,500, and the increased expenditure in connexion with the central branch, a deficit of about £10,000 is to be anticipated. The board has expressed the fear that unless a large increase in subscriptions is obtained it may be impossible to work the infirmary to its present extent. At a recent meeting the Finance Committee reported the receipt of a legacy from the late Mr. G. W. Smith amounting to £2,339. This is to be devoted, at the discretion of the medical board, to the assistance of any member of the medical or surgical staff suffering from illness through injuries sustained in the course of *post-mortem* examinations or operations.

The following amounts, making a total of £3,400, were given to the various hospitals from the Hospital Sunday Fund during the year 1909:

Manchester Royal Infirmary	£536
Children's Hospital	533
Sick Poor and Private Nursing Institution ...	345
St. Mary's Hospitals	325
Ancoats Hospital	322
Salford Royal Hospital	256
Hospital for Incurables	232
Hospital for Consumption	210
Royal Eye Hospital	169
Northern Hospital	162
Hospital for Skin Diseases	113
Victoria Memorial Jewish Hospital	57
Ear Hospital	49
Hulme Dispensary	22
Dental Hospital	18
Greengate Dispensary	16
Lock Hospital	13
Chorlton-on-Medlock Dispensary	13

LONDON.

Classes for Children Hard of Hearing.

THE Education Committee of the London County Council on March 2nd considered a report of the Day Schools Subcommittee on the desirability of forming special classes for children who are hard of hearing. Medical inspection had revealed the fact that there was a large number of partially deaf children, and a detailed examination of over 500 children in the schools for the deaf showed the necessity of providing classes for the partially deaf. The educational attainments of such children varied, but as a rule were beyond those of the average deaf child; these children required, for their proper development, not only training in lip reading and articulation, but a more extended curriculum than that provided in a school for the deaf. Moreover, the environment of a class containing totally deaf children was not suitable, for it was desirable that partially deaf children should mix with hearing children as much as possible. The subcommittee proposed, therefore, that pupils in the "hard-of hearing" classes should mix with hearing children during recreation, and that the classes should be carried on in class-rooms in ordinary schools or in schools for the deaf on the same site as ordinary schools. These conditions would be fulfilled at the Ackmar Road School for the Deaf, Fulham, and the subcommittee recommended that, as an experiment, subject to the approval of the Board of Education, a class for partially deaf children be established there. This was agreed to.

School Clinic for Norwood.

At the same meeting the Education Committee considered the proposals submitted by a committee appointed at a meeting of medical practitioners in Norwood called with the object of assisting the Council in the medical treatment of school children. The committee proposed to obtain premises in close proximity to West Norwood station and within easy access to the tramways, and to establish there a centre for the treatment of 2,000 children suffering from affections of the throat and ear, eye and skin (chiefly ringworm). It was suggested that the Council should provide equipment estimated to cost £175, and arrange for the services of a nurse on six half-days a week. With these exceptions, the terms proposed were in accord with those adopted in the case of the hospitals. The Education Committee agreed to accept the offer in respect of 1,500 children, and to arrange for the attendance of one of the nurses in the public health department, but declined to provide the equipment as suggested. In other respects the agreement drawn up coincided with that entered into with the Hampstead medical men,[1] the right of inspection by the Council being reserved.

Social Welfare Association.

A meeting to establish a social welfare association for London, to the proposed objects and constitutions of which reference was made in the JOURNAL of February 26th, p. 528, was held at the Mansion House on March 4th. The Lord Mayor said that the association was to be representative in the widest sense of the word; no one society or interest or group of interests would be allowed to control either the central or local councils. The Archbishop of Canterbury, in moving a resolution to the effect that it was desirable to form a social welfare association for London, said that during the last half-century overlapping had been sometimes the hope and sometimes the despair of men trying to deal with the problems of poverty. So long ago as 1869 Mr. Goschen, who was then at the Local Government Board, called attention to the impossibility of expecting successful work for the poor so long as the work done by the Government and official agencies, and that done unofficially, were in watertight compartments. Something like £7,000,000 a year was being spent through the Poor Law, and he was convinced that it was not spent to the best advantage. Lord George Hamilton, in seconding the motion, said that the Poor Law Commission had found that there was almost as much need to improve the working of charity as to reform the Poor Law administration. The defects in charitable work were due not to want of funds or workers, but to want of co-operation and organization. The Postmaster-General (Mr. Herbert Samuel), in supporting the motion, said that though the State could do much of the heavier work of social reform, much of the finer work could only be done by personal labour and voluntary associations. The Chief Rabbi, Sir Melvill Beachcroft and the Earl of Lichfield, also supported the motion, which was carried unanimously.

Seamen's Hospital Society.

Sir Ernest Shackleton presided at the annual court of governors of the Seamen's Hospital Society which was held on March 7th. Mr. Nairne read the eighty-ninth annual report of the committee of management, which stated that although the income of the society failed to meet the expenditure incurred, the total receipts from annual subscriptions and donations showed a decided increase, and if it were not for the continued fall in the amount of the legacies received, the finances would be in a satisfactory state. During the year, 34,300 patients had been treated at the society's institutions—3,401 more than in the preceding year. The report was adopted. Sir Ernest Shackleton said that he knew the hardships and anxieties of the sailor, and could realize what was being done for him by the society. The greater part of the shipping of the country—the shipping upon which the people of the country depended for their food—was carried on by the thousand and one tramp steamers which were manned by men who were practically unknown to those on shore. The society did a splendid work, and ought to be thoroughly supported. On the motion of Sir George Vyvyan, seconded by Sir Patrick Manson, Sir Ernest Shackleton was elected an honorary life governor of the corporation, in recognition of the services which he had rendered to the society.

[1] BRITISH MEDICAL JOURNAL, February 26th, 1910, p. 535.

WALES.

TRAINING OF SANITARY INSPECTORS.

A MEETING of the South Wales and Monmouthshire Centre of the Sanitary Inspectors' Association of Great Britain was held at the Town Hall, Newport, Mon., on March 5th. Dr. W. Williams, M.A., D.P.H., County Medical Officer of Health for Glamorgan, presided over the general meeting, and Mr. John T. Quinton, Liverpool, Chairman of the General Council, took the chair at the council and members' meeting. A vote of thanks was passed to the chairman and members of the Education and Secondary Education Committee of the Glamorgan County Council for establishing a course of gratuitous instruction for eligible candidates desirous of qualifying as inspectors of meat and other foods. A further vote of thanks was most heartily given to Dr. Williams, the president, for his generous assistance in connexion with this scheme, mention being made of his readiness at all times to assist in the welfare of the sanitary inspector. The course of instruction above referred to consists of two parts: (1) At Pontypridd, lectures and practical demonstrations of three hours a week for twelve weeks; and (2) London, three weeks for practical instruction at the Metropolitan Cattle Market, Islington, and at the Billingsgate Fish Market, etc. Candidates must have been residents within the Administrative County of Glamorgan for at least one year prior to December 31st, 1909; ard they must also hold the certificate for Inspector of Nuisances of the Royal Sanitary Institute, or the certificate of the Sanitary Inspectors' Examination Board, London. No charge is made for tuition. Third-class return rail fares will be allowed to Pontypridd, and to London provided 80 per cent. of the possible attendances from the commencement of the courses (January 18th, 1910). An allowance of 30s. per week each will be made in respect of the period spent in London, subject to satisfactory conduct and progress, and the candidate undertaking to sit for the Royal Sanitary Institute's Examination for Inspectors of Meat and Other Foods at the end of the course. The estimated cost to the council is nearly £300. These cases create a precedent with regard to technical instruction.

Special Correspondence.

PARIS.

The Practitioners' Congress: The Medical Crisis in France.

ON April 7th the third Congrès des Praticiens will be opened in Paris. As has already been stated in the JOURNAL, the object of its promoters is to bring together, without distinction of grade or standing, all doctors practising medicine in France, and to ask them to discuss their professional interests, to express their views of the part which medicine is called upon to play in social affairs, and to attempt to regulate the by-effects upon medicine as a career which the numerous laws as to medical assistance, hygiene, and prophylaxis passed by Parliament during the last fifteen years have had. If the assertion so often made—that there is a medical crisis in France—be true, then traces of its existence should be found in the programme of this congress. The following are the subjects set down for discussion:

The Public Health Act of 1902, the point at issue being the compulsory notification by doctors of infectious diseases.
The increase of medical fees.
The medico-social aspects of abortion.
Unqualified practice: the employment of medical students as locumtenents.
Hospital administration in France and abroad.
Hospital abuse: the exclusion from hospitals of non-indigent persons.
Workmen's societies and the right of the patient to choose his own doctor.
The restriction of the number of students admitted to medical schools.
The superior medical council.
Medical syndicates and medical education.

In this list of questions proposed for discussion by various practitioners three have to do with the medical crisis: the increase of fees, the exclusion of non-indigent persons from hospitals, and the limitation of the number of entries at the medical schools. The first two mentioned are real, but, in my opinion, are only secondary causes of the malaise from which the medical profession in France is suffering; the third, the excessive number, the plethora of practitioners, would seem to be the chief and most important.

It is undeniable that medicine regarded as a business very rarely enriches those who practise it, that doctors to-day do not derive from their calling alone money enough to provide against old age, that those who have no resources other than the income obtained from practice must go on working indefinitely, and that it is something more compelling than love of their art which causes so many old country doctors to die in harness struggling desperately to retain the favour of a *clientèle* which distrusts their age more than it honours their experience. This is a bitterness which our forefathers did not know, a bitterness bravely and proudly hidden, but not the less touching to those who discover the secret. The causes of this unfortunate state of things are undoubtedly many and complex; a complete and detailed study of each one of them would require many pages; at present they can only be briefly indicated. In the first place there are general causes: in France during the last forty years the cost of living has been nearly doubled, while the interest on saved money invested in securities has diminished by two-fifths; when, therefore, a demand is made that medical fees should be raised, the reason is not that they have, in an absolute or mathematical sense, been diminished as compared with those obtained in the past. There has in fact been no actual fall in fees except in surgery; in that department of practice competition, which has grown more and more keen, has brought about special conditions. But we may justly ask that the price of our services should be augmented in proportion to the increased price which we ourselves have to pay for all the necessaries of life and that our fees should be restored to their relative value. In the second place there are certain special causes, such, for example, as the existence in towns of the abuse of hospitals, which give their advantages either gratuitously or at absurdly low charges. Owing to the facility with which admission can be obtained to hospitals, owing also to the multiplication of clinics and dispensaries open to everybody, a part of the *clientèle* which ought properly to pay ordinary practitioners has grown accustomed to be treated for little or nothing at these institutions. Another factor is that friendly societies, which during the last twenty years have been very considerably developed, usually found their success upon exploiting the doctor, abusing his generosity, which he is always too ready to show, and taking advantage also of the eternal *invidia medicorum*. Most of the friendly societies have endeavoured, and have very often succeeded in the beginning, in imposing on us very low tariffs. In a corresponding way the State has made us the associates of its social charity, and has imposed upon us the duty of attending at half price all the indigent persons for whom the local *bureaux de bienfaisance* formerly paid. Nevertheless, as I have said, all these causes appear to me to be secondary. As a matter of fact the profession has already reacted against them, and a beginning has been made in attenuating their effects, or in obtaining certain compensations. There remains, then, only the last of the three causes I have enumerated—overcrowding—and it is the most effective. There is an over-production of doctors. The number has almost doubled within twenty years. The fees formerly received, therefore, are in fact divided by half, the operation of this single cause. It is not possible to do more here than state the elements of the problem. The overcrowding is due in part to the prestige of the profession with families of the *petite bourgeoisie*, who see in medicine a career for their children at once honourable and remunerative. It is due in part also to the great facility with which the faculties can be entered, and to the assured result due to the easy nature of the examinations. In order to enter a school of medicine it is at the present day only necessary to be a *bachelier*, and this certificate can be obtained at the end of a course of secondary education by everybody or nearly everybody of the most ordinary intelligence. When once a man had

entered a school of medicine it is practically unheard of that he should leave it without the diploma of a doctor. It is very much a matter of time. The examiners have gradually fallen into the habit of not throwing men of 25 or 30 years of age into the street, and they display a lofty or smiling complaisance which covers a multitude of sins. To get rid of a student during his course is a still more delicate matter. In order to remedy this state of things many doctors now propose that there should be an examination for admission into a school of medicine, and that the number of the applicants admitted should be properly adjusted to the needs of the population. This system is, as a matter of fact, already in force at the military and naval schools, the engineering schools, and the veterinary school. It remains to be seen what reception the practitioners' congress will give to this project.

BERLIN.

A Debate on the Imperial Board of Health: Lead Poisoning, Alcoholism, and Mosquitos and Disease.—Dr. Koch on Tuberculosis Hospitals.

DURING last week's debate on the Budget in the German Reichstag, the Imperial Board of Health (which forms a department of the Imperial Ministry of the Interior) came in for a good deal of criticism and advice on the part of Socialist, Radical, and even Conservative members. In answer to Herr Brühne (Socialist), Herr Bumm, the President of the Board, categorically denied that the Government did too little for the protection of workmen engaged in the lead industry. The protective regulations, he said, were as complete and as far reaching as they could be made, and their enforcement was carefully watched over by special inspectors. An inquiry, set on foot and recently brought to a close by the Government of Holland, had once more demonstrated the impossibility of substituting any other white for white lead. Germany was not in a position to prohibit white lead absolutely. Such a prohibition was possible only in countries where no lead mines existed. Dr. Leonhardt (Radical), in the name of his party, demanded that the sale of drugs, such as opium, morphine, etc., except by medical prescription, should be declared illegal. And, further, asked the Government to include in next year's estimates a sum to be devoted to a thorough statistical inquiry into a campaign against alcoholism. This, he felt assured, would materially assist the great fight that was being waged with both tuberculosis and syphilis; or all knew the connexion that existed between these scourges of the nation and alcoholism. A certain proportion of the revenue from spirit duties he thought should be devoted to measures against the spread of alcoholism. He did not deny that of late good work in this direction had been started, and he was specially grateful to the administration of German railways for their excellent and practical new arrangements; but far more remained to be done, for the deaths from alcoholism in Germany still numbered about 15,000 a year. Secretary of State Delbrück replied that the Government was quite at one with the previous speaker in deploring the ravages of alcoholism among the population. But he felt more than doubtful that any practical good could result from State intervention—above all, from a statistical inquiry. Such an inquiry would prove exceptionally difficult and expensive, besides being really superfluous, since the whole question lay open for all to see and judge. Gradual enlightenment of the masses was what must be counted on for bringing about a change for the better, and this enlightenment must proceed from teachers, from employers, from parents and relations. The Imperial Board of Health found plenty of valuable work to do in directing and assisting such endeavours throughout the realm. Again, the Government contributed 10,000 marks (£500) annually to the societies for combating alcoholism. Ministerial rescripts and statistical tables could do no good in a matter such as this. In answer to the question of another member on gnats and disease, Bumm replied that the Imperial Board of Health was at present actively engaged on a research into the question whether the common gnat was or was not a carrier of disease, that the research was nearly completed, and that its results would be published before long.

Dr. Robert Koch, Berlin's Honorary Citizen, to whom the municipal committee entrusted with the preparation of plans for a new tuberculosis hospital had appealed for advice, gave evidence before the committee at the City Hall on March 3rd. He expressed his decided opinion that the best means of combating the spread of tuberculosis lay in increased care for patients suffering from open pulmonary disease, and strongly counselled that the new establishment should be exclusively devoted to consumptives in every stage of the disease. Since the condition in which tubercle bacilli are coughed up and spread was comparatively rare among children, he thought the hospital should be reserved for adults only—three-fourths of the available beds for men, one-fourth for women. As to site, dry air and sunshine were, in his opinion, the great desiderata. The proximity of forest land was not so important a consideration as to outweigh other advantages of a site. The building itself should be of great simplicity, both in construction and decoration; as many rooms, and in each room as few beds as possible. The excellent Moabit municipal hospital, and the plaster-plank pavilions in the Charité hospital grounds were typical examples of what could be achieved with the simplest arrangements even at the present day, when German towns appeared to be vying with each other for pre-eminence in the elegance and first-class comforts of their tuberculosis hospitals.

Correspondence.

THE DANGERS OF ARYLARSONATES.

SIR,—From his letter in the JOURNAL of March 5th Mr. Ernest Lane appears to have been singularly unfortunate in his dealings with the arylarsonate salts—that is, of 12 cases treated thereby by him, 4 were followed by grave toxic signs; whereas at the military hospital at Rochester Row, out of 308 cases so treated, not a single case was followed by any bad effects.

The arylarsonates employed consisted of either atoxyl, soamin, orsudan, or arsacetin, soamin being the most frequently employed. Most of these cases received from three to six courses of 100 grains. During 1909 no fewer than 2,000 intramuscular injections of either soamin or arsacetin were given, not one of which was followed by any untoward symptom.

Now, one cannot help thinking that there must have been some cause for this discrepancy between the two experiences. Mr. Lane does not mention the technique he pursues in carrying out the treatment; but I would point out that in both papers on the subject which I read at the annual meetings of the British Medical Association at Sheffield and at Belfast I pointed out that "solutions of atoxyl, soamin, and orsudan were apt to decompose on keeping, and insisted on the necessity of these solutions being freshly prepared at least daily, otherwise toxic symptoms might follow." Neglect of this precaution has to my knowledge led to unfortunate results, such as described by Mr. Lane. Latterly we have been using arsacetin altogether, as its solutions do not decompose from keeping.

Mr. Lane admits he met with much success with the arylarsonates at one time, which induced him to advocate their employment until he came across those toxic cases, which to my mind were quite accidental; in that case I do not think it quite fair to condemn the arylarsonates *en bloc*.—I am, etc.,

F. J. LAMBKIN,
Col. R.A.M.C.

Military Hospital, Rochester Row, S.W.,
March 8th.

THE LOCALIZING VALUE OF UNEQUAL PAPILLOEDEMA.

SIR,—The extreme importance which Sir Victor Horsley ascribes to the inequality of papilloedema in the two eyes and the great stress he lays on the value of a greater amount of change in one eye as indicative of the side of the causative lesion must be my excuse for writing in reply to his article of March 5th.

I may preface my remarks by saying that I am glad to see a possibility of compromise between the two apparently opposed points of view of Sir Victor Horsley and myself.

In his summary he states that "the maximal intensity and age of the papilloedema or optic neuritis in cases of increased intracranial tension is of the highest value in clinical localization of the lesion, *and is ipsolateral with the maximal pressure effects of the latter*" (italics not in the original). This surely indicates a considerable modification from his position, when, in the discussion at the Ophthalmological Society on March 12th, 1908,[1] he offered "*an earnest protest against the view that the Queen Square records showed that the optic neuritis was not 'worse' on the side of the lesion. If the matter were looked into carefully, it would be found that it was.*" I find myself much more nearly in agreement with the statement in its present form.

The main point on which he criticizes my papers is the value of this difference between the papilloedema in the two eyes. I might suggest that there is a certain element of inconsistency in his criticism. He bases it on the fallibility of my statistics (these were drawn from the 102 cases (out of a total of 200) which showed no signs of subsidence or atrophy at the time of observation), and he mainly supports his criticism by adducing the statistics of 18 cases. Surely, if statistics are so liable to lead one into error, as he would make out, the fallibility is much greater in 18 cases than in 200.

For the benefit of those who have not read my paper in *Brain*,[2] I may quote briefly the principal facts on which I based my statements. "In dealing with the question of the amount of neuritis we can only take those cases in which no signs of subsidence or atrophy had made their appearance. This leads to the exclusion of 58 out of 160 cases in which neuritis developed, leaving 102 cases." In 54 cases the swelling was equal or the difference did not exceed 0.5 D. In 25 cases the swelling was greater on the side of the tumour and in 23 it was greater in the opposite eye. In 3 cases only one eye was affected at the time of death or operation, and in each of these it was the contralateral eye. In 11 cases the difference in the swelling was more than 2 D, and in 7 of these it was the contralateral eye that was most affected. "*In all these cases, apart altogether from the question of measurement, there were definite differences in the ophthalmoscopic pictures presented by the two eyes.*" Again, though I do not lay that stress on the haemorrhagic character that Sir Victor Horsley does—and I have seen fresh haemorrhages developing in a case of neuritis not infrequently after the cranium has been opened and the pressure relieved—yet, even taking this ground, I find that out of 17 cases where haemorrhages appeared in only one eye, 5 showed the haemorrhages only in the contralateral eye. And if we take the ultimate result on vision when the eyes were unequally affected after subsidence of the neuritis, we find that "there were 9 such cases, and in 4 it was the eye on the side of the tumour in which the vision was most affected, and in 5 it was the opposite eye."

With such cases as I have mentioned before me is it astonishing that I should have come to the conclusion that until we know more of the factors which in some cases determine the greater incidence of neuritis on the side away from the tumour, we should not place reliance on inequality of papilloedema as a clinical sign?

De Schweinitz and Holloway,[3] in presenting the report of the committee appointed by the American Medical Association to investigate the effect of operation on "choked disc," give the following data:

> The swelling was practically equal in each eye in 33.3 per cent. of cases; was greater in the eye on the side of the tumour in 46.6 per cent. of the cases, and was greater in the eye on the side opposite to the tumour in 20 per cent. of the cases. The number of cases examined, however, is too small to render these statistics of much value. Moreover, it was not possible to submit them to the requirements on which Mr. Paton very properly insists.

Sir Victor Horsley lays much greater stress on such changes as might be considered indicative of the age of the neuritis. There is one indication of the age of a neuritis which is of indisputable value, and that is direct observation of its commencement. In 30 of the cases reported in my paper in *Brain* the neuritis started while the patients were in the hospital. In 13 of these disc changes were observed simultaneously in both eyes. In 6 the changes appeared first in the eye of the same side as the tumour, and in 11 in the eye on the side away from the tumour. In the pressure experiments of Cushing and Bordley[4] they not infrequently saw oedema of the disc and retina appearing first in the opposite eye. In the first of their two cases of artificial tumour (where the tumour was produced in the left occipital base) it was the opposite eye (the right eye) which first showed changes, and it was in the right eye that the changes remained more marked throughout. In the second case (tumour produced in left parietal region) changes in the discs were noted at the same time in the two eyes, but were greater in the left than in the right, and persisted in a more marked way in the left.

I do not seek to prove that the eye on the side of the tumour may not be more frequently affected than the opposite eye; but I wish to insist that in a very definite percentage of cases it is the opposite eye that is first and most affected, and that the percentage of cases in which this happens is too large to allow us to use the point for localizing purposes. Surely the more scientific plan would be to submit to a critical examination all the cases in which the papilloedema is greater in the opposite eye, and so attempt to gain a knowledge of the circumstances under which this peculiarity is likely to occur.

As Sir Victor Horsley says, I have had the opportunity of seeing most of the 18 cases on which he bases his criticism. In the brief time at my disposal since the publication of his paper I have been able to identify 16 of these, in which I was able to observe the condition and the progress of the neuritis. It is of course impossible to go into these cases here, but I would like to point out one or two misconceptions to which Sir Victor Horsley's short summaries might give rise. In 6 cases he has given the measurement of the highest point on the surface of the disc as the amount of swelling, without taking into consideration the error of refraction in one or other eye, though in one case this amounted to as much as 4 dioptres of hypermetropia.

In the second place, the brevity of the summaries hardly gives a fair representation of the conditions described in the hospital records. One or two examples will show how the fuller notes may alter the aspect of the case, for example:

CASE II.—*Right Frontal.* Classed as ipsolateral.
Two days after admission both discs showed equal swelling with numerous haemorrhages and exudate, the highest point of each disc being seen with + 8 D. A fortnight after admission Mr. Gunn again described the discs as similar with 7½ D of swelling in each. The day before operation the swelling in the *left eye* had increased by 1 D, the right eye remaining the same as before.

CASE III.—*Right Subcortical. Rolandic Area.*
Classed as ipsolateral.
Vision in right eye = $\frac{6}{9}$, in left eye = $\frac{6}{36}$.
R.O.D. All edges blurred. Highest point of disc + 6 D. General fundus level + 1 D. Swelling + 5 D. Venous congestion not great. Arteries normal in calibre.
L.O.D. More flecked with white. Highest point of swelling seen clearly with + 8 D, blurred with + 10 D. Numerous tiny capillaries curling over top of swelling. Radiating out from temporal side of disc is a lot of oedema, which tends to run in striae. Whole of retina towards macular area oedematous and swollen, giving a measurement of + 4 D. General fundus measured away from oedematous area (in upper nasal region) between + 2 and + 3 D. Swelling + 6 to + 7 D.

CASE IV.—*Left Parieto-occipital Tumour.*
The discs were in a late stage, subsiding into atrophy, on admission. The swelling after deducting + 1 D, hypermet., present in both eyes, was: Right eye, + 4.5 D; left eye, + 5 D.

In Case No. 8 Sir Victor Horsley quotes the rough note made by the house-physician on his first investigation of the case, and not the fuller note made by Mr. Gunn when the pupils were fully dilated, which showed gross neuritis in both eyes, with haemorrhages and exudate and equality of swelling.

Case 11 presented a most interesting problem in diagnosis, and was the subject of a lecture by Sir William Gowers, fully reported in the *Lancet*.[5] I do not think, considering the fact that the left nerve showed a direct

[1] *Trans. Ophthal. Soc.*, vol. xxviii, p. 138.
[2] *Brain*, 1909, vol. xxxii, p. 65.
[3] *The Therapeutic Gazette*, July 15th, 1909.
[4] *Johns Hopkins Hosp. Bull.*, vol. xx, No. 217, April, 1909.
[5] July 19th, 1909.

pressure atrophy without neuritis, and the right disc showed an ordinary neuritis, that it is fair to use this case as proof of anything more than the existence of direct pressure on the left nerve.

If I were classifying the cases in which I have been able to refer to the full notes, I should exclude two from the list—one because the subsidence into atrophy was so marked in each eye on admission, and the other (Case 11) for the reasons given above. I should say that 5 showed an equal neuritis, or such slight differences that no judgement could be based on them. In 4 the greater papilloedema was definitely ipsolateral, in 3 as definitely contralateral; and of the 2 others, in one it was probably contralateral and in one probably ipsolateral.

The importance of the paper and the great authority that Sir Victor Horsley's name gives to anything he publishes must be my justification for entering into such a lengthy and detailed criticism.—I am, etc.,

London, W., March 7th. LESLIE PATON.

CANCER OF THE CERVICAL OESOPHAGUS.

SIR,—In the clinical lecture dealing with operation on primary cancer of the oesophagus, published by Mr. Morriston Davies in the JOURNAL of February 12th and referred to by Dr. William Hill in a letter on March 5th, the question of a preliminary gastrostomy is not mentioned.

While surgeons will agree with Mr. Davies as to the desirability of early diagnosis, and if practicable, removal of the growth at an early stage in cancer of the cervical portion of the oesophagus, the very heavy mortality that has hitherto attended these operations is a serious factor that must be taken into consideration.

Gastrostomy, as now performed, is an operation attended with extremely little risk, even when done, as is so often the case, when a patient has been seriously starved through inability to swallow, but if properly undertaken at an earlier stage the risk is very slight.

Might I suggest that in any cases such as Mr. Davies refers to a preliminary gastrostomy would be a useful measure, and would tend to lessen the risk of the more dangerous operation in the neck, seeing that the patient could be adequately fed through the gastrostomy opening during the whole course of the treatment? Should the patient be so fortunate as to have the original disease cured, the gastrostomy opening can be readily closed by allowing the tube to remain out.

In advocating a preliminary or temporary gastrostomy in these conditions, I am only supporting views which have been expressed elsewhere on the subject.—I am, etc.,

London, W., March 8th. A. W. MAYO ROBSON.

APPENDIX DYSPEPSIA.

SIR,—The generic term "dyspepsia" has during the last few years been assailed by surgeons, and the assemblage of symptoms which constitute it has been resolved into several well-known recognizable species. Each species has its particular characteristics: the gastric, the pyloric, the duodenal, the calculi in the gall bladder, the pancreatic, and a combination of two or more; but so far I am not convinced that appendix dyspepsia possesses the variable characteristics depicted by Mr. Moynihan.

I should like to join Mr. Bowlby in warning the profession to be cautious in accepting the diagnosis of appendix dyspepsia even by the analytical process of exclusion.

In my experience the difficult cases of diagnosis of appendix trouble are those in which patients have never been confined to bed, and Mr. Moynihan has very rightly emphasized the importance of further investigation in this particular direction. Surgeons cannot blink the fact that a large number of operations which have turned out to be unnecessary have been performed, through over-confidence in the curative effect of operation *quâ* operation, and I may remind the younger generation of surgeons that not a long while ago ovaries were removed by celebrated men for the cure of certain neurotic conditions. I hope that at present such an operation is never performed without the fullest consideration of its serious consequences.

I have been invited on more than one occasion to support actions against surgeons for performing such operations, the results of which had proved contrary to optimistic prognostications and where the victims had subsequently either drifted into a lunatic asylum or the family life had been broken up.

Obscure cases of dyspepsia, when the services of a surgeon had been requisitioned, should be investigated with a very open mind. The sources of error arising from preconceived ideas are enormous; for example, pain in the region of the ileo-caecal valve may be extremely misleading. I have seen such pain in dyspepsia arise from carcinoma of the transverse colon in a young girl in her teens, and many other instances might be given.

On the other hand, I have seen the so-called "neurasthenics" upon whom I have operated over three years earlier remain well. In one case the neurasthenia originated in dyspareunia, which proved to be due to a long appendix adherent in Douglas's pouch. In another case a gentleman was invalided home from India, and the removal of a small white thread-like band tying down a long appendix about its middle over the brim of the pelvis resulted in cure.

We are indebted to Mr. Moynihan for ventilating the subject and also to Mr. Bowlby for advising the profession to "hasten slowly."—I am, etc.,

Cardiff, March 2nd. J. LYNN THOMAS.

SIR,—Amongst the interesting letters that have been appearing in the BRITISH MEDICAL JOURNAL on the subject of appendix dyspepsia, one explanation of the improvement that may take place after an operation in cases of gastric or intestinal dyspepsia has been overlooked—that is, that the majority of these cases, even if gastric or duodenal ulcer exists, would derive great temporary or even permanent benefit from the rest in bed, careful diet, and regular use of aperients that such an operation as removal of the appendix entails, without this relief being due directly to the removal.—I am, etc.,

Llandrindod Wells, Feb. 28th. W. RINGROSE GORE, M.B.

CONDITIONS WHICH SIMULATE DYSPEPSIA.

SIR,—I am sure that every one has read Dr. Hutchison's lecture on conditions which simulate dyspepsia, published in the BRITISH MEDICAL JOURNAL of February 26th, p. 485, with very great interest. Apart from the lucid manner in which the facts are set forth, the teaching is so true and matter-of-fact that probably every medical practitioner has come across most of, if not all, the conditions which Dr. Hutchison enumerates where at first blush the diagnosis of dyspepsia suggested itself. If I may venture to add to Dr. Hutchison's list, I would also mention Ménière's disease and tuberculous meningitis in children. The latter I have often seen mistaken in the early stages by very eminent people for gastric disturbance, until the onset of paralysis or coma made the diagnosis clear. I have also notes of a couple of cases in which the patients complained of vomiting and the cases were diagnosed as gastritis, until closer inquiry elicited the other symptoms of Ménière's disease—namely, tinnitus, slight deafness, vertigo, and faintness.

Another class of cases—which I used to think was mere speculative theory put into books to perplex the student, until I came across an example myself—is acute glaucoma, which starts with vomiting.

There is just one remark that I should like to make in connexion with hysterical vomiting. The case described by Dr. Hutchison fits in exactly with a case of mine treated by him at the London Hospital, but I should like to point out that even in cases of obvious hysteria the possibility of some coexisting organic disease should not be overlooked. I heard of a case of a young woman who was suffering from vomiting which was thought to be of nervous origin, but who afterwards was operated on for perforated gastric ulcer.—I am, etc.,

London, E., Feb. 28th. W. M. FELDMAN.

MINER'S NYSTAGMUS.

SIR,—I notice that, when discussing the etiology of miner's nystagmus (March 5th, p. 558), Dr. Harrison Butler did not suggest an error of refraction as a possible predisposing cause, although the case which he describes shows this. I mention this because I know that as a body miners systematically neglect their eyesight, this fact

having been forcibly brought home to me during the last few months whilst examining school children in a mining district, the parents simply stating that if their child had to wear glasses he would not be allowed in the pit. I understand that at present no examination of the eyes is required by the owner before a man is employed as a collier; and surely, if evidence could be produced to show that a definite relationship exists between errors of refraction and miner's nystagmus, the owners for their own protection would soon insist on such an examination.

Dr. Harrison Butler states that there is no muscle fatigue (of the eye) when the man is at work; but during such heavy work, when practically all the man's muscles are in use, how can those of the eye escape the general fatigue of the body? If in addition a serious error of refraction exists, which of itself would lead to strain, this would be especially noticeable at the end of the day's work, the time when the nystagmus first appears; and I suggest that the nystagmus is akin to the physiological tremor of the hands which many people have after great physical exertion, but that, of course, it quickly becomes pathological as the condition develops.

It may be asked why, if these arguments are correct, miner's nystagmus does not occur as soon as the man becomes a collier? But then his tissues are young, and can overcome the strain imposed upon them, and it is as he gets older and is still subjected to the same conditions of very heavy work in a poor light and in a bad position that the strain is felt, and nystagmus shows itself.—I am, etc.,

W. D. CARRUTHERS, M.B., D.P.H.,
Assistant Medical Officer of Health,
Ambergate, March 6th. County of Derby.

ENGLISH LITERATURE AND LONDON EXAMINERS.

SIR,—I am evidently not so fortunate in my son as "Oxonian" is in his. My son, whose age is 17, has been rejected in English at the last London matriculation examination. Of the boys sent up from his school, 50 per cent. have failed. This, I presume, is good, if it is true that 65 per cent. of the whole number who entered have been rejected.

I have always contended that one has a better chance of getting through the London matriculation before leaving school than after, but upon looking down the advertisements of institutions that prepare students for this examination, and comparing their results with the above figures, I feel convinced of my error. In fact, I have taken my son from school this week, that he may have special help, and so stand a better chance of success next time.

It does not do to spend too much time upon an entrance examination when one has a long curriculum to get through before qualifying. Another matter which affects the father is that of expense, for failure at examinations means prolonging the student's time in town, and, may be, at hospital; that, to my mind, is a strong point in favour of choosing another university for obtaining a degree in medicine.—I am, etc.,

March 7th. AN OLD BOY.

PART-TIME MEDICAL OFFICERS OF HEALTH.

SIR,—Dr. Martyn's letter will, doubtless, consolidate the resistance provoked by Dr. Larking. The Association of Medical Officers of Health was formally constituted by an enthusiastic and influential meeting on March 2nd, in the interests of those who do not devote their whole time to the duties of their primary office. Already nearly 250 subscriptions have been received from all parts of Great Britain, and support and encouragement have been accorded from every section of the profession.

A statement of facts is in preparation, and will shortly be issued to the profession, to members of Parliament and others. In the meantime, while not controverting Dr. Martyn's proposition that to speak and act in an unbiassed manner is beyond the morals of some men, we would point out that the suggestion that the income derived from part-time appointments is negligible is — well, amazing!

Many part-time medical officers of health are paid £200 or more a year, and the aggregate sum paid annually by sanitary authorities in Great Britain to medical officers of health in private practice is very nearly £150,000. We will not be unkind enough to ask Dr. Martyn to substantiate his references to part-time poachers, but we do ask him to indicate six recent instances of unknown strangers being appointed to part-time posts applied for by more competent local men. Such instances are, with the poaching thrown in, according to Dr. Martyn, not uncommon.

What Dr. Martyn really objects to is not the principle of part-time appointments (or else why should he sympathize with local men who fail to obtain "negligible" salaries?), but the possibility of gentlemen being appointed who are not at the time practising in the districts where vacancies occur.

Is this the cat in the British Medical Association bag? If so, to use a vulgarism, where does the "public interest" come in?

F. G. CROOKSHANK, Chairman,
D. A. BELILIOS, Honorary Secretary,
Association of Medical Officers of Health.
Wimbledon, S.W., March 6th.

SIR,—In his forcible letter (March 5th, p. 603) Dr. J. S. Walker, referring to the attitude of the British Medical Association to part-time medical officers of health, says:

> The vote given at the Divisions is not the voice of the profession of the district; . . . not half the meetings are attended by the members. The Divisions are mostly governed or ruled by cliques; many of my acquaintances have never attended a single meeting.

As honorary secretary of a Division whose spare time is largely taken up by efforts to rouse members out of their apathy and stimulate them to show a modicum of interest in matters which concern their welfare almost vitally, I wish to protest against the tone he adopts towards those members of the Association who have the energy to attend meetings and give ungrudgingly of their time and abilities to the service of the profession as a whole. All the Divisional officials with whom I am acquainted up and down the country will, I am sure, be only too delighted to see the end of our sparsely attended meetings, as they mostly are to-day, and will welcome without any regard to the ideas of the "local clique" a big influx to every meeting of these friends of Dr. Walker's who at present never attend any. The constitution of the Association is thoroughly democratic, and all questions of moment are submitted to the individual members in Divisions, and on their pronouncements only action is taken. If those who do not at present attend meetings object to the course taken by those members who do, they have the remedy in their own hands—to come to meetings regularly and make their voices heard and their views known in the usual manner. Their attitude of "I won't play in your yard" is merely childish and petulant, and is the main obstacle to advances in medical politics.—I am, etc.,

A. E. HODDER,
March 5th. Honorary Secretary, Wigan Division.

SIR,—The discussion on part-time and whole-time medical officers of health has been interesting and instructive. I have held two such appointments in conjunction with private practice, and my sympathies have rather been with the general practitioner medical officer of health.

My attention has, however, been drawn by a friend to the conduct of a medical officer of health (part time), which provides a very strong argument against giving such appointments to men already in competitive practice. This gentleman wrote: "I only suggested that you should send the swabs up yourself because some practitioners prefer that the medical officer of health does not see their cases personally. If you do not care to do this I must do it myself." Such action is, I believe, opposed to the instructions of the Local Government Board issued to medical officers of health a few years ago, and it must necessarily be productive of friction between the official and the medical attendant.

Some few months ago I was acting for my friend, and was called in the night to a boy in an epileptic fit. Next morning, when I visited the case, I was met by the sanitary inspector, who said that he had been sent over by the medical officer of health to see what was the matter, as he had heard that the doctor had been sent for in the night, and there was a case of scarlet fever next door.

Now, such conduct as this induces me to think that perhaps it is better to deprive the general practitioner of these small appointments—always badly paid—than to sow the seeds of dissension broadcast throughout the profession. The occurrence of such cases as I have mentioned—and I am informed they are very numerous—may account for the vote of the Divisions and also justify the same. May I suggest that you reprint, as you did some time ago, the memorandum of the Local Government Board on the subject?—I am, etc.,

Leckhampton, March 7th. WM. MILLIGAN.

*** The document to which our correspondent refers is we believe, a letter addressed by the Local Government Board to a medical officer of health on April 1st, 1903. The part of the letter relating to this matter is as follows:

In the Board's opinion the certifier's statement of a notified case of infectious disease should be accepted unless there is reason to believe that he is not acting in good faith. The Board do not consider that it is ordinarily the duty of a medical officer of health to examine personally patients who have been notified as suffering from infectious disease, with a view to checking the accuracy of the certificate; and where circumstances may render such an examination desirable, it should be made after communication with the medical practitioner in attendance, and, if possible, with his co-operation. . . . The Board regard it as highly improper that an inspector of nuisances should under any circumstances collect throat-swabs from suspected diphtheria cases.

CREMATION.

SIR,—In connexion with your interesting articles on the progress of cremation, in the JOURNAL of March 5th, you may be interested to know that there is now a crematorium at Lausanne, Switzerland, situated at the Montoie Cemetery. It has only been open a short time, for when the body of a near relative of mine was cremated there on September 20th, 1909, the officials told me that it was only the eleventh cremation that had taken place. The side walls are lined with spaces for the reception of urns.—I am, etc.,

Ruthin, North Wales, March 6th. GEORGE A. CRACE-CALVERT.

Medico-Legal.

ACTION IN RESPECT OF A LUNACY CERTIFICATE.

The Trial.

AT the Manchester Assizes on February 16th and following days, before Mr. Justice Walton and a special jury, a female weaver named Florence Fowler claimed damages from Mr. W. P. Grant, M.R.C.S., of Rochdale, on the ground that he had negligently and without reasonable care certified her to be a person of unsound mind, whereby she was committed to the County Lunatic Asylum at Lancaster, under a reception order made by a Rochdale magistrate on December 14th, 1907.

It was alleged that though she had never been insane she was detained in the asylum for over a year without first being taken before a magistrate as a person of supposed unsound mind; she was removed by the relieving officer of the Rochdale Union to the workhouse, and there examined by two medical men, of whom the defendant was one. The latter certified that she was of unsound mind, and it was alleged that one of the grounds upon which he based his conclusions was that the plaintiff was under delusions as to her relations with Dr. Harris, who had attended her in Rochdale. In cross-examination, she said that Dr. Harris had led her to believe that he would marry her.

After the case for the defence had been opened on February 19th the court adjourned until the following day, when counsel for the defendant said that after consultation with counsel for the plaintiff it had been agreed in the interests of their clients and in the general interest that there should be an end to the litigation. On behalf of Dr. Grant he said that after hearing the evidence they had come to the conclusion that the woman was not insane, and it was to be understood that the result of the litigation was to free Dr. Grant from any charge of having acted with negligence. The counsel for the plaintiff said that when Dr. Grant examined the woman she was in the imbecile ward, and that it appeared that without acting negligently he may not have had his mind so directed to the case as it would have been had the proceedings been taken before a different tribunal. He was glad to be able to say that he thought, under the circumstances, Dr. Grant did not act with negligence. He, however, pointed out that it had been shown in this case that a perfectly sane person might be committed to a lunatic asylum and treated as a lunatic for over a year. The proceedings in the case were absolutely wrong, and it was because the proper procedure was not adopted that Dr. Grant had not been able to look at the case as he should have done.

Mr. Justice Walton said that it was now admitted that all reflections on Dr. Grant were withdrawn, and he thought properly withdrawn. The case had brought home to his mind very vividly that the gravest responsibility rested upon constables, relieving officers, magistrates, and medical men, who put into force the machinery of the lunacy law. He was not reflecting upon anything which had been done in this case, but it seemed plain that a man or a woman not a pauper, but perfectly well able to maintain himself or herself, might be taken to the workhouse, shut up in an imbecile ward, and then declared to be a lunatic, and placed in a lunatic asylum without any public inquiry, any hearing before a magistrate, or any notice of what was going on.

Dr. Herbert Harris asked permission to go into the witness box to clear his character. He said there was not a word of truth in the girl's allegations against him. Mr. Justice Walton said that the plaintiff had made statements, and Dr. Harris had repudiated them. As Dr. Harris was not a party to the action it was impossible to carry the matter further.

Meeting of the Rochdale and District Medical Society.

At a specially convened and thoroughly representative meeting of the Rochdale and District Medical Society, held on February 24th, the matter as it affected Dr. Harris was considered, and resolutions adopted expressing the profound sympathy of the members of the society with Dr. Harris, and their regret that, owing to the course which the trial had taken, he had been unable to bring forward the evidence which had convinced the members of the society of his absolute innocence of the charges. The members of the society present were James Melvin (President), W. J. Hodgson, Arthur Jefferson, H. Harris, J. A. Menzies, G. Kincaid Pitcairn, William Stanwell, W. Hirst Bateman, D. Richmond, J. A. Ashcroft, Sam T. Lord, A. Wallace, J. G. Standing, H. H. Hitchon, F. W. Hartley, E. Sugden, George W. Malim, A. B. McMaster, W. E. Jameson, John Rodley, M. J. Mahony, E. Baldwin, E. Harvie Cox, F. H. Mackichan, Hector M Calder, R. Burdett Sellars, Lewis Anderson, A. Dickson, W. P. Grant, W. J. Kerr, W. Pinck, and J. Cuthbertson Walker (Secretary).

SOLICITORS' FEES AND STAMP DUTIES.

PERPLEXED.—Out-of-pocket expenses are never reckoned as part of a solicitor's fees, so that our correspondent can only claim the payment of one guinea under the agreement. It would have been otherwise if all legal expenses had been stipulated.

ASSISTANTS' FEES.

310-7 writes that his assistant gave chloroform for another doctor, and received a fee of a guinea. On various other occasions he has given chloroform for a friend, for which he has been paid half a guinea a case, and these cases would not have been given to our correspondent, who asks whether it is customary to give an assistant the fee, or any part of it, in such cases.

*** An assistant, who is engaged for his whole time, is not entitled to receive any fees for professional work without the consent of his principal. Where the work is introduced entirely by the assistant, as in the second instance stated, it would be an equitable arrangement for the fees to be shared equally between principal and assistant.

THE OBLIGATIONS OF A LOCUMTENENT.

CAECUM.—In answer to the questions submitted to us: (1) and (2) The interval of a year is sufficient to mark the absence of any direct connexion between the attendance of our correspondent as locumtenent and the present request to attend. (3) The fact of being paid makes no difference. If a practitioner attends in an emergency for another at the request of a patient or the patient's friends, and is asked to continue the case, he should decline; if the patient insists, and refuses to see the previous medical attendant again, he may continue to act, considering himself as the other's substitute and offering him half the fees. At the end of the attendance he should endeavour to get the patient to return to his former medical attendant, but if that is impossible, it is, we believe, generally admitted that he may continue in attendance. If, however, he has acted at the request of the medical attendant, he may under no circumstances take the patient as his own. (4) Any obligation of a locumtenent would ordinarily only apply to the individual case, and would not extend to the whole family, although if called in to attend a child, and having thereby obtained an introduction to the family, it would be very unfair shortly after to accept an invitation to attend one of the other children or any other member of the household.

THE Pellagra Committee of the Province of Bologna has offered a prize of £60 for the best plan of hygienic improvement of agricultural labourers' dwellings.

THE Council of the Röntgen Society has appointed Dr. A. Howard Pirie, Chief Assistant in the *X*-ray Department at St. Bartholomew's Hospital, as delegate at the third International Congress of Physio-therapy to be held in Paris at Easter.

Universities and Colleges.

THE GRANTS TO UNIVERSITY COLLEGES.

ON March 4th the Chancellor of the Exchequer, who was accompanied by Mr. Haldane and Mr. Runciman, received a deputation of representatives of the universities and university colleges of England other than Oxford, Cambridge, and Durham, to ask for financial assistance. The deputation, which was introduced by Mr. A. H. G. Ackland, consisted of Lord Reay (London University), Sir Oliver Lodge (Birmingham University), Vice-Chancellor Hopkinson (Manchester), Sir John Brunner, Bart. (Liverpool), Sir Nathan Bodington (Leeds), Dr. Hicks (Sheffield), Sir Hugh Bell, and others.

The deputation pointed out that the students' fees only covered a fourth of the actual capitation cost. Matriculation work having been relegated to the schools, there was more room for post-graduates and post-graduate work, and this had increased the cost. So far from grants from the Government diminishing local patriotism, such official recognition encouraged subscriptions; many localities were willing to provide buildings and equipment, but were unable to guarantee the annual sum for maintenance. The Chancellor of the Exchequer in reply said that the arguments met with his entire sympathy, but the deputation could not have come at a worse time as he had no money. He promised, if full details were sent to him, that they would have his consideration, and a business committee was appointed by the deputation to prepare the required statistics.

UNIVERSITY OF OXFORD.

Philip Walker Studentship, 1910.—The Board of Managers have reported to the Vice-Chancellor that they have elected to the studentship Mr. William Ray, B.Sc.Oxon., M.B.Adelaide, Magdalen College.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.B.—L. B. Perry, Queens'; C. F. Searle, Pemb.; H. B. Weir, Trin.
B.C.—G. G. Alderson, Caius; A. L. Singer, King's; G. H. H. Waylen, ing's; H. B. Weir, Caius.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia was held at the College on March 2nd, the President, Sir R. Douglas Powell, in the chair.

Diploma in Psychiatry.

A letter from the Medico-Psychological Association of Great Britain and Ireland, urging the institution of a course of instruction and a diploma in Psychiatry, was read. The following resolution was moved by Dr. Mercier and seconded by Dr. Percy Smith:

> That a committee be appointed to settle the conditions under which a post-graduate diploma in Psychiatry shall be granted by this College.

After a prolonged discussion, in which Drs. Claye Shaw, Coupland, F. Warner, Norman Moore, Craig, and Bedford Pierce took part, Dr. F. J. Smith moved the following amendment, which was seconded by Dr. F. Taylor:

> That a committee be appointed to consider the letter from the Medico-Psychological Association and report to the College.

After further discussion, in which Drs. Herringham, Turney, Archibald Garrod, and Squire joined, the amendment was carried, and the President nominated Sir W. Church, Sir W. Allchin, Drs. Mercier, Percy Smith, Coupland, Norman Moore, and F. Taylor to serve on the committee, with power to add to their number.

Recognition of Schools.

On the recommendation of the Committee of Management, the Eastern District Secondary School, Douglas, Isle of Man, and Haileybury College were added to the list of institutions recognized by the Examining Board in England for instruction in chemistry and physics.

CONJOINT BOARD IN IRELAND.

Diploma in Public Health.—The following candidates have passed the recent examination for the Diploma in Public Health:

M. C. Blair, M.D.Univ. Glasg.; H. M. Cade, M.R.C.S.E., L.R.C.P.Lond.; R. T. Cann, M.R.C.S.E., L.R.C.P.Lond.; D. J. O'Regan, L.R.C.P. and S.I.; B. Khapoorji Photographer, L.R.C.P. and S.Edin.; H. K. Smyth, M.B., R.U.I.; G. Stead, M.R.C.S.E., L.R.C.P.Lond.; R. L. Thomas, L.S.A.Lond.; Lydia K. Towers, M.B.Univ. Edin. (with Honours); N. B. Watch, L.R.C.P. and S.Edin.; Captain J. W. West, M.B., R.U.I., R.A.M.C.; H. O. Williams, M.R.C.S.E., L.R.C.P.Lond.

SOCIETY OF APOTHECARIES OF LONDON.

Election of Representatives.

AT a meeting of the Court of Assistants of the Society of Apothecaries held on February 8th Mr. Arthur T. Norton, C.B., F.R.C.S., was elected as the Representative of the Society upon the General Medical Council for the ensuing year. Mr. E. Parker Young, M.R.C.S., L.M., L.S.A., was re-elected as Representative of the Society on the Central Midwives Board.

Payment of Medical Practitioners Called by Midwives.

The Court also passed the following resolution:

> That, inasmuch as the absence of any provision for the payment of medical practitioners when called in on the advice of midwives in accordance with the "Midwives Act" is causing serious injury, the Government be respectfully urged to carry into effect the recommendation of the Departmental Committee on this subject as soon as possible, and that a copy of this resolution be forwarded to the Prime Minister, the Lord President of the Council, and the members for the City.

The Services.

EXAMINATION FOR PROMOTION, HOME STATIONS.

THE following is the list of the successful candidates at the December Examination for Promotion of Majors of the Royal Army Medical Corps in Technical Subjects:

Major N. TYACKE, Technical Subjects. Already passed in (*d*) ii.

Major L. A. MITCHELL, M.B., (*d*) ii; .75. Has yet to pass in Medical History, etc.

Major T. P. JONES, M.B., Technical Subjects. Already passed in (*d*) ii.

Major G. A. MOORE, M.D., Medical History, etc. Already passed in (*d*) ii, in Army Medical Organization in Peace and War, and in Sanitation and Epidemiology.

Major R. C. LEWIS, Army Medical Organization in Peace and War. Already passed in (*d*) ii, in Sanitation and Epidemiology, and in Medical History, etc.

Major C. T. SAMMAN, Technical Subjects. Already passed in (*d*) ii.

Major C. M. FLEURY, Sanitation and Epidemiology. Already passed in (*d*) ii, in Army Medical Organization in Peace and War, and in Medical History, etc.

Major G. DANSEY-BROWNING, (*d*) ii and in Technical Subjects, .75 in (*d*) ii, and .8 in Medical History, etc.

Major K. B. BARNETT, M.B., F.R.C.S.I. (*d*) ii and in Technical Subjects; .75 in (*d*) ii.

Captain G. H. GODDARD, (*d*) ii; .75. Already passed in (*h*).

Captain G. G. DELAP, D.S.O., (*d*) ii. Already passed in (*h*).

Captain A. A. SEEDS, M.D., (*d*) ii; .75. Already passed in (*h*).

Captain E. B. KNOX, M.D., (*d*) ii. Already passed in (*h*).

Captains H. S. ROCH, C. R. EVANS, E. P. SEWELL, M.B., FITZG. G. FITZGERALD, A. D. JAMESON, J. T. JOHNSON, M.D., and P. G. HYDE, M.B., (*d*) ii; .75. Already passed in (*h*).

Lieutenant H. V. B. BYATT, (*h*) iii. Already passed in (*b*), (*d*) ii, and (*h*) ii.

Lieutenant H. GIBSON, (*d*) ii, and in (*h*) ii and iii. Already passed in (*b*).

Lieutenant C. A. T. CONYNGHAM, M.B., (*d*) ii, and in (*h*) ii and iii; .75 in (*d*) ii. Already passed in (*b*).

Lieutenants J. C. L. HINGSTON and J. JAMES, M.B., (*d*) ii and in (*h*) ii and iii. Already passed in (*b*).

Lieutenant R. M. DICKSON, M.B., (*d*) ii and in (*h*) ii and iii; .8 in (*h*) ii and iii. Already passed in (*b*).

Lieutenant A. L. STEVENSON, M.B., (*d*) ii, and in (*h*) ii and iii; .75 in (*d*) ii. Already passed in (*b*).

Lieutenant J. W. HOUSTON, M.B., (*d*) ii; .75. Has yet to pass in (*h*) i, ii, and iii. Already passed in (*b*).

Lieutenant W. J. DUNN, M.B., (*d*) ii, and in (*h*) ii and iii. Already passed in (*b*).

Lieutenant F. B. DALGLIESH, (*d*) ii, and in (*h*) ii; .75 in (*d*) ii. Has yet to pass in (*h*) i and ii. Already passed in (*b*).

Lieutenants M. LECKIE, S. G. WALKER, M.B., and F. M. HEWSON, (*d*) ii and in (*h*) ii and iii. Already passed in (*b*).

Lieutenant A. L. FOSTER, (*d*) ii and in (*h*) ii and iii; .75 in (*d*) ii. Already passed in (*b*).

Lieutenant C. M. RIGBY, (*d*) ii and in (*h*) ii and iii. Already passed in (*b*).

Lieutenant T. S. EVES, M.B., (*d*) ii and in (*h*) iii. Has yet to pass in (*h*) i and ii. Already passed in (*b*).

Lieutenant L. MURPHY, (*d*) ii and in (*h*) ii and iii. Already passed in (*b*).

THE ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

The King's Levée.

AMONG the presentations at the levée on March 1st at St. James's Palace was that of Colonel W. P. Whitcombe, upon promotion to the rank of Colonel, and appointment as Administrative Medical Officer, South Midland Division, Territorial Force. Colonel Whitcombe afterwards presented the following officers of the Royal Army Medical Corps (Territorial Force): Lieutenant-Colonel C. T. Griffiths, on appointment to command of the 2nd South Midland Field Ambulance; Major C. Howkins and Major W. H. Stephen, on attaining Field Rank, and on first appointment to the Territorial Force; Captain

G. W. Craig, Lieutenant C. R. Lunn, M.B.; Lieutenant W. M. Sturrock, M.B.; Lieutenant W. McCall, M.B.; Lieutenant W. A. Holland, Lieutenant J. H. Hobling, Lieutenant A. A. Kingston, M.B.; Lieutenant S. G. Webb, M.D.; Lieutenant H. F. W. Boeddicker, M.B.; Quartermaster and Honorary Lieutenant W. H. Kimpton. The following officers were also presented on the same occasion: Lieutenant-Colonel J. Paul Bush, C.M.G., R.A.M.C. (Territorial), on appointment to command of 2nd Southern General Hospital; Surgeon-Major C. Forsyth, R.G.A. (Territorial); Captain A. MacGregor, R.A.M.C. (Territorial); Lieutenant A. J. Riddett, R.A.M.C. (Territorial); Major A. C. Tunstall, R.A.M.C. (Territorial); Lieutenant-Colonel R. M. West, R.A.M.C. (Territorial); Major F. H. Westmacott, R.A.M.C. (Territorial).

Territorial Head Quarters at Aston.

The War Office has consented to make a grant of £7,000 for the purpose of properly adapting and equipping the buildings and portion of the old Aston Lower Grounds which were purchased two years ago for £13,000 to furnish head quarters for the 8th Battalion of the Royal Warwickshire Regiment and the local units of the Royal Army Medical Corps and the Army Service Corps. The quarters of the Royal Army Medical Corps, formerly the old aquarium, will comprise a fine entrance-hall opening out into the sergeants' mess, together with orderly rooms, waiting rooms, etc., and the company offices of the First and Second South Midland Field Ambulances and the First South Midland Mounted Brigade Field Ambulance. There will be a lecture-room 46 ft. by 23 ft. The men's recreation-room and canteen will be 46 ft. by 37 ft. 6 in. The spacious drill ground was formerly the old skating rink. At one end will be a covered drill shed and wagon store.

Lowland Camps.

The arrangements for the annual camps of the Territorial medical units during 1910 have been issued. The Lowland Mounted Brigade Field Ambulance, Glasgow, goes to Biggar with the Mounted Brigade from June 18th till July 2nd. The First and Second Field Ambulances from Glasgow and the Third Field Ambulance from Edinburgh go to Gailes on July 16th. The Second General Hospital from Edinburgh goes to Netley, while the Third and Fourth General Hospitals from Glasgow will train at Woolwich as last year.

Public Health AND POOR LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

County Borough of Leeds.—Although Dr. Spottiswoode Cameron's complete report for 1908 was not issued until the end of 1909, he had submitted a preliminary statistical report some months before. The birth-rate during 1908 was 24.8 per 1,000, the death-rate from all causes 15.5 per 1,000 of the population living, and the infantile mortality-rate 138 per 1,000 births. A large portion of the report is concerned with an account of the action taken by the Leeds Corporation in connexion with the prevention of tuberculous milk being supplied to the city. During 1908 the veterinary assistant to the medical officer of health made 481 visits to dairy farms and examined 7,397 cows. In 46 instances animals were found with udder disease. Of this number 11 were proved on further examination to be suffering from tuberculosis of the udder. In addition to these, 4 other cows whose udders were not obviously affected were under observation, and 1 was found subsequently to have more or less general tuberculosis. When discussing the supply of milk obtained from farms outside the city boundaries, Dr. Cameron considers it probable that nearly one-third of these farms are sending infected milk into the town.

Obituary.

AUGUSTIN A. LE ROSSIGNOL, M.D.ABERD., M.R.C.S.ENG., L.R.C.P.LOND.,

HONORARY CONSULTING SURGEON, JERSEY GENERAL DISPENSARY.

By the death of Dr. Augustin Le Rossignol, which occurred on February 18th at St. Helier, Jersey, as the result of acute broncho-pneumonia, the profession in Jersey has lost one of its senior and most respected members.

Dr. Le Rossignol, who was born in 1842, was educated at Victoria College, Jersey, and in France, where he graduated as B.ès Sc. in 1862. He then entered as a student of medicine at the London Hospital, obtained the diploma of M.R.C.S. in 1866 and that of L.R.C.P. in 1867, and took the degree of M.D.Aberd. in 1868. He then began practice at St. Helier, Jersey, where his family had long been well-known and respected residents. There he acquired a good practice. He became Honorary Surgeon to the Jersey Dispensary, and held other honorary appointments. He was one of the founders of the Jersey Medical Society, acted as its Secretary for some years, and was ultimately elected President. He always took the warmest interest in the society, and in his will left to it the sum of £100 to be devoted to a special object.

In 1903 Dr. Le Rossignol received the honour of election as a jurat of the Royal Court of the island. In that position as also as a member of the States he devoted much time and attention to his official duties, and thus found it necessary to reduce, gradually, his private work. His interest in professional matters, however, never flagged. He continued his regular attendance at the meetings of the Medical Society, whilst giving his support also to the Jersey Division of the British Medical Association.

From the very onset of his brief, fatal illness, Dr. Le Rossignol appeared to realize that he would not recover, but he met his end with perfect calmness and entire trust. The interment took place at St. Saviour's Cemetery and was numerously attended, among others by the Lieutenant-Governor of Jersey, the Chief Magistrate, and several members of the medical profession.

Dr. Le Rossignol married Miss Edith Sorel, by whom he had a family of three sons and one daughter. The eldest son, Austin, a young medical man of marked ability and much promise, died three years since, of diphtheria, when a resident officer at the London Hospital. The others, together with Mrs. Le Rossignol, survive to mourn the loss of a most attached and devoted husband and father.

MISS ISLA STEWART, Matron and Superintendent of Nursing at St. Bartholomew's Hospital, died at Chilworth, Surrey, on March 6th. For more than twenty years she had worked consistently for the registration of trained nurses, under the authority of the State, and the present satisfactory position of the movement is due in no small measure to her influence. Naturally tolerant, generous, kindly, and peace-loving, she always stood firm where vital principles were involved, and placed the welfare of the cause she had so much at heart above all personal considerations. As a matron she won not only the respect, but the affection, of those who worked under her, and the spirit she infused into the nursing department under her control was that of the public school, where the scholars themselves are jealous for and maintain its high tone, and teachers and pupils are on the best terms. At the time of her death Miss Stewart was a member of the Nursing Board of Queen Alexandra's Imperial Military Nursing Service, Principal Matron of No. 1 (City of London Hospital) of the Territorial Nursing Service, President of the Matrons' Council of Great Britain and Ireland, and of the Society for the State Registration of Trained Nurses, and Honorary President of the League of St. Bartholomew's Hospital Nurses. Her services to the profession of nursing received recognition in her appointment as an honorary member of the Irish Nurses Association, the German Nurses Association, and the American Federation of Nurses, and a special medal, which she valued very highly, was conferred upon her by the Assistance Publique of Paris. Her memory will long be cherished both in this country and in our colonies and abroad by members of the profession which she loved and served with unselfish devotion.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Samuel Rona, Professor of Dermatology in the University of Budapest, author of papers on the etiology of rhinosclerma, eczema, gangrene and phagedaena, rodent ulcer, angioneuroses, and of a work on venereal diseases, of which two editions have appeared, aged 52; Dr. Nikolai Kumberg, author of numerous writings on the history of medicine, and of a biographical dictionary of Russian practitioners, which was unfortunately left uncompleted at the time of his death; Dr. Johann Krannhals, one of the editors of the *St. Petersburger medicinische Wochenschrift*, aged 56; and Dr. Follen Cabot, of New York, a lineal descendant of John Cabot, brother of Sebastian Cabot, the famous explorer, a specialist in genito-urinary surgery, in his 40th year.

Medical News.

THE King has been pleased to sanction the following appointments to the Order of the Hospital of St. John of Jerusalem in England:—As Knights of Grace: Robert A. Gibbons, M.D., Lieutenant-Colonel Frederick H. Appleby, M.R.C.S. (from Honorary Associate), Major Robert J. Blackham, R.A.M.C. (from Honorary Associate). As Esquires: Major Charles A. Hodgetts, M.D., L.R.C.P., A.M.C. of Canada (from Honorary Associate), Charles J. Copp, M.D., Major Harry B. Yates, M.D.

ON March 9th the Battersea Borough Council by a large majority decided to proceed at once to carry out the resolution for the removal of the Brown Dog antivivisection memorial.

THE annual report of the Caxton Convalescent Home, Limpsfield, for all connected with the printing industry, presented to the annual meeting on March 5th, stated that 135 convalescents had been restored to health through its agency. A special appeal is being made to liquidate the building debt of £900 incurred in extensions.

THE Orient Line has arranged an Easter sea trip to Gibraltar and Marseilles. The tourists will leave London on March 18th by the *Orvieto*, and will reach London again on April 1st by the *Osterley*, both being 12,000-ton twin-screw vessels. The journey can be broken at Gibraltar by those who desire to visit Africa or the South of Spain.

AMONG the lectures to be given at the Royal Institution after Easter is a course of three on the mechanism of the human voice, by Dr. F. W. Mott, F.R.S., Fullerian Professor of Physiology; Professor C. J. Holmes will give two lectures on heredity in Tudor and Stuart portraits; and Major Ronald Ross, F.R.S., two lectures on malaria. The Tyndall lectures on electric heating and pyometry will be given by Professor J. A. Fleming.

AT the meeting of the Medico-Legal Society at 11, Chandos Street, Cavendish Square, W., on Tuesday, March 22nd, at 8.15 p.m., Mr. J. Howell Evans, F.R.C.S., will read a paper on The Value of the Ear in Identification; Dr. Wynn Westcott will communicate a note on Deodands; and Dr. H. Oppenheimer will made a communication on The Liability for Malpraxis in Ancient Law.

A THREE months' course of lectures and demonstrations in hospital administration for candidates for a diploma in public health will be given at the North-Western Hospital, Hampstead, N.W., by Dr. J. MacCombie, Medical Superintendent, on Mondays and Thursdays, beginning on April 4th. The lectures on the two days in each week will be identical, and a member of the class may attend on either day. The fee for the course is 3 guineas. Further particulars can be obtained from Mr. T. Duncombe Mann, Clerk, Metropolitan Asylums Board, Embankment, E.C.

A COURSE of six lectures on the prevention of destitution will be delivered by Mr. and Mrs. Sidney Webb at St. James's Hall, Great Portland Street, London, W., on Monday evenings, beginning on April 4th, 1910. The Home Secretary, Mr. Winston Churchill, will preside at the meeting on Monday, April 25th. At the close of each lecture answers to questions will be given orally by the non-lecturing partner. Numbered and reserved stalls, 1 guinea for the course of six, or 5s. for a single lecture; and other seats half a guinea for the course, or 2s. 6d. for any single lecture, can be obtained on application to the Secretary of the National Committee to Promote the Break-up of the Poor Law, 5 and 6, Clement's Inn, Strand, W.C.

DR. C. W. DANIELS, of the London School of Tropical Medicine, is delivering a course of lectures in the West India Committee Rooms, 15, Seething Lane, S.E. The first lecture was given on March 10th; the others will be delivered on March 14th, 17th, and 21st, at 4 p.m. The lectures, which are illustrated by lantern demonstrations, are intended to give persons about to reside in the tropics, and especially the representatives and employees of commercial and industrial undertakings, an opportunity of acquiring a knowledge of the cause and spread of tropical diseases and the means of prevention. The lectures are delivered as a sequence to those already given by Professor Simpson at the London Chamber of Commerce. Tickets can be had on application to P. Michelli, C.B., London School of Tropical Medicine, Royal Albert Dock, E., or Mr. Algernon E. Aspinall, Secretary to the West India Committee, 15, Seething Lane, E.C.

THE duties of a sanitary medical officer on the Persian shore of the Caspian Sea appear to be of a most strenuous kind; there was early in December a limited outbreak of cholera at Astara. Dr. Lascaridès, the representative of the Persian Sanitary Council, succeeded in localizing the epidemic, but in taking measures to prevent its dissemination to neighbouring ports he had to forbid the voyage of certain persons until the period of observation had terminated. This action was very much resented; the would-be travellers threatened the doctor with death, and were only induced to refrain from violence on that much-tried official giving them maintenance money out of his own pocket.

THE Princess of Wales opened the new buildings of the Hospital for Invalid Gentlewomen in Lisson Grove on March 7th. The institution, of which Miss Florence Nightingale was first lady superintendent until 1853 when she went to the Crimea, was first started by Lady Canning in Chandos Street, and removed two years later to Harley Street. On the expiration of the lease of the Harley Street premises last year the site in Lisson Grove was secured on favourable terms. Since the foundation of the institution some 5,000 cases had passed through the hospital, many coming from India and the Colonies. After a brief dedicatory service by the chaplain, the Rev. C. E. Harris, the Princess declared the building open and subsequently made an inspection of the premises. There is accommodation for thirty-two patients in small wards and private rooms. The operating room on the fourth floor is well lighted and is reached by a spacious lift.

THE nineteenth annual report of the Nurses' Co-operation, 8, New Cavendish Street, London, W., shows that 468 fully trained nurses, and 27 asylum-trained nurses, belong to the Co-operation, and that there are also 13 nurses eligible for election working on probation for six months. The nurses on the staff receive the whole of their earnings, subject only to a deduction of 5 per cent. in the case of those who joined before the end of 1903, and 7½ per cent. in the case of those admitted since. The fund formed by this percentage is used for upkeep, payment of permanent staff and incidental expenses, and the maintenance of a policy by which nurses are insured against accident, the surplus being invested as a reserve fund. The committee also arranges a policy of insurance against sickness and death, the contributions of the nurses being supplemented from the funds of the Co-operation.

THE Chelsea Clinical Society held its annual dinner on March 3rd at the Gaiety Restaurant, Strand. Mr. Leonard A. Bidwell, president of the society, was in the chair, and there was an excellent attendance of members and friends. The Chairman, in proposing the toast of "The Society," said that though the Chelsea Clinical Society was one of the youngest of the medical societies, its progress was remarkable and was due to the fact that its members were enthusiastic in the work and had never neglected the social side. The popularity of the meetings was enhanced by permitting the members to indulge in smoking. Dr. Barry Ball, in responding to the toast, gave an interesting account of how the society had migrated from different localities in Chelsea till at last it had settled down at the Chelsea Dispensary. Dr. Eric Pritchard proposed the toast of "The Kindred Societies and Guests," which was acknowledged by Dr. Samuel West, President of the Medical Society of London and by the Mayor of Chelsea. The proceedings terminated after Mr. Charles Ryall had given the health of "The President and other Officers," which was acknowledged by the chairman.

SOME idea of the magnitude of the business of industrial assurance in this country may be gathered from the sixty-first annual report of the Prudential Assurance Company recently issued. As the figures are so large, we shall use only round numbers. The total number of policies in force at the end of the year was over 18¼ millions, including 1¼ millions free or paid up policies; the amount assured was 185½ millions, and the premiums received in respect of these policies amounted to £143,000 a week, or nearly 7½ millions sterling a year. The average duration of the policies in existence exceeded 11½ years, and the average age of the assured was 33¼ years. The number of free policies granted during the year to those policy holders of five years' standing and upwards who desired to discontinue their payments was over 150,000, raising the number in force to over 1½ million. The number of free policies which became claims during the year was 41,000, and the total number of claims and surrenders (including 4,545 endowment assurances matured) was 382,000. The claims of the year amounted to over 2¾ millions sterling. The results of the actuaries' valuation of the life assurance fund in the industrial branch showed that it amounted on December 31st to 31½ millions, with a net liability of 30¼ millions sterling. The company also has an ordinary branch, and its total assets in both branches, as shown in the balance sheet, amount to over 74 millions.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

H. wishes to hear of a safe and reliable stove or heating apparatus which will keep in all night and not give off noxious fumes, for use in an invalid's bed-sitting room; gas is not available.

J. D. D. asks for advice in the treatment of soreness of the tip of the tongue in a man aged 40; the papillae appear to be enlarged and show as discrete red spots; there is no ulceration. The patient is of gouty tendency, but temperate, and has excellent general health; he has given up smoking for a month. Local mild stringents and an acid mouth-wash have been prescribed.

THE PRESCRIPTION OF ASPIRIN IN SOLUTION.

G. E. C. asks whether there is any objection to prescribing aspirin in combination with liquor ammonii acetatis, in which it is freely soluble, and what is the chemical resultant in the solution.

*** When acetyl-salicylic acid is dissolved in solution of ammonium acetate it undergoes gradual hydrolysis into acetic and salicylic acids, but the change occurs much more slowly than when it is dissolved in weak alkali; experiments show, however, that the amount of hydrolysis in such a solution is rather considerable in a few hours. There appears no objection, on chemical grounds, to dissolving acetyl-salicylic acid in this way if the medicine is to be taken at once, but if it is to be kept for a day or two more or less ammonium salicylate will be produced, and the advantage of using the derivative of salicylic acid instead of the acid itself will be largely lost.

INCOME TAX.

E. W. A. inquires (1) whether, having omitted to claim before September 30th, he can now appeal for assessment at the rate of 9d. instead of 1s. 2d.; (2) whether, if he pays this year, he can claim next year; (3) whether he can claim allowance for deterioration of motor bicycle, cycle, horse, trap, books, and instruments.

*** (1) The necessary claim not having been made before September 30th, it will not be possible to obtain reduction of the duty to the rate of 9d. in the pound. As to whether, after the passing of the Finance Bill for 1909, it may be possible to claim reduction to the intermediate rate of 1s., no opinion can be expressed until the eventual wording of the bill is known. In the meantime payment should be deferred. (2) Payment for this year forms no bar to a claim for any other year. (3) Allowance can be claimed for wear and tear of motor bicycle, cycle, and instruments, and the claim should be pressed unless it will be to our correspondent's advantage to claim instead the cost of renewals when incurred. With regard to the horse and trap, it is not customary to allow for deterioration in value, but the cost of renewals should be claimed, and in the case of books a reasonable sum for maintenance of the medical library.

ANSWERS.

AN APPEAL TO MASONS.

DR. FRED. J. SMITH (138, Harley Street, W.) writes: May I appeal to any brother Masons who have Masonic votes to spare to send them to Mrs. Knights, 10, Elma Road, West Green Road, Tottenham, or to me?

LETTERS, NOTES, ETC.

A WARNING.

M.D. writes: An American, giving his name as Dr. S. Clifton, called on me recently and begged of me a loan as a confrère, giving his address at Hindhead, Haslemere. On my writing to remind him, the letter was returned through the Dead Letter Office endorsed "unknown."

COLONIAL PRACTITIONERS AND THE BRITISH REGISTER.

WITH reference to the statement contained in the letter of Dr. Thomas P. Lucas (BRITISH MEDICAL JOURNAL, February 26th, 1910, p. 547), that British medical diplomas are registered without fee in Victoria and Queensland, Dr. P. Merrin writes from Dublin to say that the statement is not now correct as to Victoria. In July, 1908, Dr. Merrin was required to pay a fee of three guineas for the registration of diplomas of the Royal Colleges of Physicians and Surgeons of Ireland, and of the Apothecaries' Hall, Dublin.

THE PITUITARY BODY.

DR. V. C. J. VANDERSTRAATEN (Colombo, Ceylon) writes with reference to the paper by Dr. Blair Bell on the pituitary body, on pp. 1609-13 of the JOURNAL of December 4th, 1909: In his researches for the bibliography relating to this organ he does not seem to have found records of papers on the same by my lamented friend, the late W. Lloyd Andriezen, M.D.Lond., sometime of the Lunatic Asylum, Wakefield. Some years ago, long before the discovery of the properties of adrenalin, I received from Messrs. Willows, Francis and Butler and Co. a circular advertising tablets of the pituitary body prepared after the investigation into its properties by Dr. Andriezen.

THE EARPIECES OF STETHOSCOPES.

DR. E. HOBHOUSE (Brighton) writes: I saw quite recently, in the description of a new stethoscope, the advice to make the earpiece small, so that it should fit well into the external auditory meatus. Having suffered a good deal from this very cause in the last year or so, I should like, with your permission, to explain why I think such advice unsound, and likely to prove a source of trouble to many. I have for one or two years suffered from irritation of the auditory meatus, with consequent accumulation of cerumen. After a long day with much use of the stethoscope the itching was very troublesome, and I am sure that it was due to the use of a stethoscope with small earpieces, which sank deep into the meatus. The effect was twofold—the pressure on the meatal walls kept up chronic irritation, and when cerumen was formed that was driven in by the entry of the earpieces and formed a plug. Now, a plug may often be no barrier to hearing; its effects varies according to its position. It may be driven inwards temporarily by the stethoscope, so as to deaden sounds very greatly for the time. Thus, murmurs, etc., which are audible one day may be, though still present, quite inaudible the next, with consequent confusion and annoyance. Owing to the intermittence of the symptoms it was some time before I suspected the true cause, and it was only when I went to consult Mr. A. J. Hutchison, in the fear that I was getting deaf, that I got at the truth. Since then I have only used a stethoscope with large earpieces which fill up the entrance of the meatus and do not enter it; this obviates the trouble. I am going to have made the largest earpieces, which will comfortably fill the orifice of the meatus without entering, and I am sure this is the right principle—at least for those who have any tendency to chronic meatal irritation. Mr. Hutchison, who kindly reassured me as to my hearing, tells me that some trouble of the kind is not at all uncommon among those who use a stethoscope constantly, and I therefore write this in the hope of enabling some of my colleagues to avoid the annoyances of intermittent deafness and the haunting fear of its becoming permanent.

MYSTERIOUS DISEASES.

WE find in the *Manchester Dispatch* of February 22nd a report of an inquest on a miner who, on arriving home from his work with a black eye, complained that "a tree had flown out and hit him." Next day black blisters came out in his mouth and afterwards over his body. In accordance with the medical evidence, as reported in our contemporary, the jury returned a verdict of "Death from *purpuraemorrhagica*, accelerated by injuries received while at work." But this terminological conundrum, though somewhat puzzling at first sight, is simple compared with "Morbus Coeoulem," which stands at the head of an interesting article in the November number of the *Birmingham Medical Review*. Here the printer's devil has surpassed himself.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postes Restantes* letters addressed either in initials or numbers.